Time in the Treatise
the Epistemology and Metaphysics of a "manner of appearance"

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Time in the *Treatise*: the Epistemology and Metaphysics of a "manner of appearance"

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To my Grandpa, who taught me to love playing with ideas.

Abstract

My aim in this work is to provide a comprehensive analysis of Hume's theory of time as it is set out in the *Treatise*. Mirroring Hume's own division into two parts, this will involve a careful look at both the epistemology of time he presents, that is, the idea of time and how this idea is formed, and the metaphysics, such as it is, of time itself. I look at two sets of motivating problems, for the metaphysics and the epistemology respectively: as regards the epistemology of time, I focus on the charge that Hume's account is circular, that he cannot explain the acquisition and formation of the concept of time without presupposing the very idea he seeks to explain. This concern cuts to the heart of traditional empiricist theories and for many highlights a fundamental inadequacy. The second set of problems relate to the temporal structure of the world that emerges from his denial of the infinite divisibility of space and time. Specifically, whether the simple, durationless moments which act as the fundamental constituents of time are capable of playing the role Hume requires of them.

I propose a unified response to both sets of challenges, and defend Hume's claim that the two parts of his system are "intimately connected" (T.1.2.4.1; SBN 39). I argue that to gain a fully satisfying interpretation and understanding of either part we must look to, and be informed by, the other. What emerges is a complex theory of mind and a cautious but powerful metaphysics guided and informed by his epistemology. His theory of time remains grounded in empiricism, but of a form that is more resilient in the face of historic charges of inadequacy.

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Contents:

1. Introduction

1.1. Motivations, Aims, and Methodology

My aim in this work is to provide a comprehensive analysis of Hume's theory of time as it is set out in the *Treatise*. This will involve a careful look at both the epistemology of time he presents, that is, the idea of time and how this idea is formed, and the metaphysics, such as it is, of time itself. I argue that we can find in Hume's account of time an intricate and interesting study that can inform our understanding of many other areas of his philosophy. What emerges is a complex theory of mind and a cautious but powerful metaphysics guided and informed by his particular epistemological commitments.

This kind of investigation provides rewards of a number of sorts: firstly, Hume's work on time is fascinating simply in and of itself. The few short sections in which Hume tackles the questions of time and our experience of it contain an engaging mix of brilliant thoughts, engaging puzzles, and apparent problems. His treatment of these topics is quick and characteristically assured. However, once beyond the surface and seeking underlying principles, all manner of complications arise. In spite of, or perhaps because of, the easy manner with which Hume approaches these questions, filling out the details of his account involves far more than simply reading them off the page. He gives hints and clues, and apparent contradictions. He will affirm principles and then immediately present what appear to be counter-examples to them. He will reject his opponent's positions as absurd and then seem to embrace the exact features of their accounts which he argued were problematic; reading these sections is a pleasurable frustration. Certainly though, there is plenty to get lost in and spending the time with them offers tempting rewards.

Considering the literature on Hume's account of time we can see that Hume's work in this area has been interpreted every which way over the years. Historically, the sections on time and space (which are presented together, for the most part) have tended to be dismissed as possessing little, if any, merit. Noxon, for example, stated that the sections on time and space

"yielded the least admired part of the Treatise."[1] C. D. Broad went further, stating that "there seems to me to be nothing whatsoever in Hume's doctrine of space except a great deal of ingenuity wasted in recommending and defending palpable nonsense."[2] More recently, this part of Hume's work has undergone something of a reappraisal and commentators including Allison, Baxter, Falkenstein, Frasca-Spada and Garrett, amongst others, have all found much more of worth in these sections. Importantly, these authors have also shown that, puzzling though these parts of his work are, careful consideration of them has the potential to illuminate other problematic themes in his work. The self, cognition and the mind, identity, causality, and his stance towards an external world can all benefit from being considered in light of these sections.

This is the second reason I take such a project to be of both use and value. Though I will not pretend that the interpretations I offer are by any means conclusive (even leaving aside historiographical concerns, the sections on time especially are so brief that such a claim would seem beyond bold). However, looking more at this topic does serve to illuminate and to challenge. In what follows I will look at one way of addressing the challenges that present themselves to Hume's work on time. I argue that addressing these involves reconsidering his position towards a number of other issues including, but not limited to, the Copy Principle and the nature and extent of his empiricism, the role of the mind and the principles of association, simplicity and complexity, and knowledge of the external world. Each of which will receive much discussion in what follows.

In light of this potential for re-evaluation, my methodology involves allowing the focus to begin with the puzzles of time rather than firm commitments regarding Hume's philosophy more broadly. When we do this we find that many of the assumed orthodoxies become less certain: that he didn't engage in metaphysics, that he is a sceptic, an atomist, even the kind of empiricism he endorses is questionable. Kail puts the point of this nicely when he notes that "There are no - though there often seem to be for many

[1] Noxon (1973) p.115.
[2] Broad (1961) p.176.

- fixed points in Hume's thought around which everything must be placed."[3] If we start our investigation bound to these orthodoxies and assuming commitments on his behalf we can be assured of finding them in his work. However, the sections on time and space provide a tonic for this; their challenging nature encourages us to reject the cruder characterisations of the kind of philosopher that Hume was and the sort of philosophy that he did.

Although it is impossible to avoid being influenced by these characterisations of Hume's work, and prioritising only one part of his theory without allowing other parts to inform our understanding of them would seem to be a reckless form of interpretation, beginning with the problems and being open to less rigid categorisations means we can come to see that Hume's position is often far from transparent. A further bonus of sifting through these stranger and more apparently conflicted parts of the *Treatise* is that the overall position that emerges is often more nuanced, subtle, and interesting than it has sometimes been judged. Finding these new angles and seeing how they reflect back upon other areas of his work is a further motivation for focusing in on this small but important topic.

However, given that Hume's work on space and time has gained more prominence of late (even if it is still one of the more neglected areas of Hume studies), we could still ask whether there is the need for another survey. I would suggest that there is in that there still seems to me to be interesting terrain that remains relatively unmapped: generally, the focus has been on Hume's account of space (quite natural in that Hume's own discussion focuses far more on space than on time). Though some have concentrated specifically on time, discussion of space has tended to dominate. I will suggest in what follows that Hume did not, and we should not, imagine that the case of time was presented as a simple analogy of space. Hume notes some interesting differences and, in what follows, I will suggest a few more. The essential nature of time differs to that of space and looking at how far this presents additional difficulties is an interesting task in and of itself. However, it becomes all the more interesting if one is also

[3] Kail (2007b), Introduction, xxviii.

seeking to critically evaluate Hume's treatment. This brings me to the final motivation for this project.

I noted above that Hume's work in this area has tended to be dismissed as rather weak. Sometimes the problems are presented as his: loose thinking, inconsistent language, shoddy argumentation, assumptions, over-confidence, poor mathematical ability – Hume has been accused of much in light of these sections. At other times the problems are presented as more down to factors beyond his control: advances in thought that he may in part have provoked but could not, perhaps, have foreseen. Whether due to his own failings or not, Hume's work on time and space has often been judged inadequate: he is deemed unable to truly resolve the issues he found and problems he posed. His account is taken to be circular or presumptuous, hindered by an overly limited foundational epistemology and a stringent insistence on crude basic principles. Part of my interest in delving further into these topics then is critical: are we right to judge these sections in this way? Or is there something more interesting and more defensible going on? In what follows, I will engage in a project that is both interpretive and critical. For all its puzzling and difficult elements, the potential rewards of further work here make the effort worthwhile.

1.2. Hume's Two-Part System of Space and Time

The structure of what follows will echo how Hume himself set these issues out and so will include discussion of both the nature and structure of time, and the nature, structure, and origin of our idea of time. Hume characterises his work on time and space as a system consisting of two parts: the first part concerns the structure of time and space and is set out in *Treatise* 1.2.1. and 1.2.2. The second part concerns the structure and origin of our ideas of time and space and is primarily dealt with in 1.2.3. Both parts are illuminated further by the objections and replies Hume considers in 1.2.4. and 1.2.5.

The core question of the first part of the system concerns what the structure of time and space is like. The line of argument Hume presents has both a

negative and a positive element: he employs several arguments against those who would take time and space to be infinitely divisible, with an aim to undermining this position. His positive proposal instead construes time and space as finitely divisible and founded on simple indivisibles; parts in the case of space, moments in the case of time. He concludes that since finitely divisible space and time is a coherent model and infinitely divisible space and time is not, to the extent that we are capable of judging, space and time themselves must be finitely divisible and grounded in simples.

Hume's arguments in this first part are perhaps the most maligned of all and, at first glance, they do indeed appear weak. There is a strange tension throughout in that he seemingly moves freely between a kind of latent realism and a more restrained focus on ideas. This has mystified many and provoked at least some degree of dissatisfaction. In seeming to attack the very coherence of infinite divisibility in general he appears to make his target much too broad. In focusing his arguments on the nature of parts he seems to neglect alternative conceptions of divisibility and so perhaps to beg the question against his opponent. He briefly considers a seemingly powerful objection and then dismisses it as "entirely frivolous."[4] At times his approach seems to display fundamental mistakes perhaps indicative of serious mathematical error and short-sightedness. The puzzle of this section at times seems to be how Hume could possibly have thought these arguments convincing at all. Certainly that seems to be the conclusion drawn by many commentators on this first part: C. D. Broad suggested that the sections on spatial divisibility could be "fairly safely dismissed as rubbish."[5] Laird characterises the first argument as appearing to be "quite exceptionally question-begging" and containing arguments that "would not deceive a child."[6] Jacquette calls his arguments against infinite divisibility "perhaps the least loved and, until recently, least examined parts of his philosophy."[7]

[4] T 1.2.2.2n1; SBN 30.
[5] C. D. Broad (1961) p.171.
[6] Laird (1932) p. 67 and p.68.
[7] Jacquette (1996) p. 61.

Historically then, this part of his theory of time and space has drawn much flak. Commentators have mostly focused on the discussion of space rather than that of time (though, as noted, Hume too has this tendency, he does include an additional argument in the case of time that has not received as much attention as it should), and the reception has been, for the most part, overwhelmingly negative. However, more recently there have been challenges to this dismissal of these sections from a number of different angles.[8] In my discussion I focus on a kind of metaphysical re-evaluation that these sections have received, examples of which can be found in Holden and Baxter.[9]

Deep criticisms also arise for the positive proposal that emerges from this part of Hume's system. In what follows I focus my critical discussion on two old problems for Hume: the problem of composition (how simple moments can form something which has duration) and the problem of union (how simple, indivisible components can come together to form unions without collapsing into one). These problems explore two sides of a simple concern: that for all his arguments against the proponent of mathematical points, Hume appears to embrace in his own solution a feature of points that he himself notes introduces trouble: their simplicity. In his discussion and response of these challenges at T 1.2.4. he does not provide illustration in the case of time and so we must do some degree of reconstruction from his discussion of the case of space. In the case of his simple spatial parts he appeals to their colour and tangibility. However, the suggestion that merely attributing colour or tangibility to these simples resolves the difficulties inherent in mathematical points has provoked no small degree of confusion and a little bit of scorn.

These problems provide my main focus in assessing Hume's positive proposal partly for interpretive reasons: they were problems Hume explicitly addressed and took himself to have overcome. He discusses both, albeit briefly, and presents his own account as beating these challenges where

[8] For a three very different approaches to re-evaluating these sections see: Franklin (1994), Frasca-Spada (1998; chapter 1, 1990) and Waxman (1996).
[9] Holden (2002), Baxter (2008), see especially chapter 2.

physical points and mathematic points could not. This presents one of the most immediately puzzling challenges in these sections (and has been a consistent target for critics) because it is far from clear how his own proposal differs to these in a way that would make it fare better; being simple, Hume's moments appear to be just as susceptible to these challenges as the mathematical points he rejects and for the same reason.

In chapter 2 I will focus on the negative arguments against infinite divisibility and in chapter 3 I will reconsider the positive proposal in light of the composition and union problems. I propose an alternative interpretation of the negative arguments which appears to offer a firmer grounding for his positive proposal and offers a means by which to show how it is that Hume's account differs from the ones he rejects in a way that results in greater success in the face of these challenges. The set-up Hume offers in T 1.2.1 is gloriously opaque and my reading of the text here is not uncontroversial. Then again, the sheer number of ways this section has been read gives me some heart in pursuing this route. Furthermore, this avenue of interpretation bears rewards: it offers a unified response to the positive and negative elements of his theory in this first part and, by so doing, offers illumination on some of these stranger puzzles. The picture that emerges is one on which Hume's account neither begs the question against his opponent, nor engages in thoroughgoing incompetence. Instead we might think he is firmly and consistently motivated by certain core principles as set out in T 1.1. His understanding of complexity and his rejection of abstraction by separation (of which more in a moment) all come to the fore in interesting and surprising ways. They equally inform the concept of time itself that will be developed and elaborated in the second part of his system.

The second part of Hume's system concerns the nature and origin of the ideas of time and space and is primarily set out in T 1.2.3. (though again, additional elements are addressed in T 1.2.4. and T 1.2.5.). Here he tells us these ideas are ideas of the "manner of appearance" of existing things, with the idea of time being "deriv'd from the succession of perceptions of every

kind."[10] My concern here is primarily with what sense we can be said to derive this idea of time from experience. Hume presents the process as broadly occurring in two stages: first, we form ideas of particular times, that is, particular temporally complex ideas, then we form a general functionally-abstract idea of time itself by association in virtue of the perceived resemblance these ideas bear to each other.

At both stages in the formation of this idea Hume's theory has been met with understandable opposition. The charge is made that his approach is constrained by a too-crude rule of appropriate derivation: the so-called Copy Principle, first expressed as the claim that "all our simple ideas in their first appearance are deriv'd from simple impressions, which are correspondent to then, and which they exactly represent."[11] Within the bounds of this principle it is argued that he cannot account for our possession of the idea of time without circularity. In chapter 4 I present the challenges for forming ideas of particular times from simple impressions, alongside an argument that the nature of our experience of time and its essential successiveness threatens a further level of difficulty: that, because experience only presents us with simple moments, forming an idea of temporal complexity from these moments requires us to interpret as temporally complex content that is actually temporally simple. This act of interpretive spin seems beyond us given we are seeking to explain our very first ideas of time. I argue these problems are powerful and provide us with strong reasons to consider broadening or reinterpreting our understanding of the Copy Principle.

In chapter 5 I examine two ways we might do this: firstly, the route advocated by Frasca-Spada on which the ideas of time and space are violations of the Copy Principle, and the principle itself is afforded a guiding role. In the case of the ideas of time and space, the principle shows us which aspects of our experience are not traceable to impressions (and so which we can infer to have been contributed by the mind). Secondly, I explore the approach proposed by Falkenstein, amongst others, on which the Copy Principle admits of an extension to allow for complex ideas to be copied

[10] T 1.2.3.6; SBN 34-5.
[11] T 1.1.1.7; SBN 4.

from complex impressions. On this extension, the idea of time requires us to copy not only content but arranged content, not only impressions but their manner of appearance. I challenge the second route and argue that the amendments required to shore it up press us closer towards the first in at least one significant respect: whichever way we go, there is no denying a pronounced role for the mind in the formation of these ideas.

In chapter 6 I present a set of challenges to the second stage of forming the idea of time, that is, how we move from ideas of particular times to a general idea of time itself. Hume, like Berkeley before him, rejected the possibility of indeterminate ideas. In his discussion of abstract ideas, presented at T 1.1.7. he instead argues that "all general ideas are nothing but particular ones" and so each idea is fully determinate in its features.[12] Hume rejects the possibility of forming abstract ideas by separation, that is, by stripping some particular idea of its particular features until it is capable of generally representing. Instead he espouses general representation achieved in virtue of resemblance-association. We perceive a number of particulars and, upon feeling a resemblance between them, come to associate them together (in line with the instinctive association the principles of association provoke). As such, thinking of one has the power to call to mind other, resembling instances. We apply a term to the collection of resembling perceptions and, by these means, further cement the habit of thought. With the habit in place, on each occasion of thought (or upon hearing or using the relevant term) we have in our mind a particular idea. However, because it is so associated with other resembling particulars it is capable of standing for many other, different, particular ideas. By these means Hume fashions functionally-general ideas out of particular ones and, by association, founds abstract ideas on particular ones.

In the process of forming general ideas then, resemblance is key; it is resemblance which provokes the requisite associations. In chapter 6 I look at problems facing the idea of time in light of this: specifically, that the requisite resemblances are elusive and cross-modal. In the case of time I

[12] T 1.1.7.1; SBN 17.

suggest we do not have obvious access to classes of non-resembling particulars, as such special challenges arise for the idea that time that are not shared by that of space. Again then, if we address only space or present a uniform account for both, work is left undone. I finish chapter 6 by arguing that we can find a relative contrast class if allow again an enhanced role for the mind. In chapter 7 I explore further the varied phenomenon of resemblance in Hume's writing. By exploring in greater depth the intricacies of what can provoke resemblance-association, I argue there is a kind of resemblance available that Hume notes which may help us account for the idea of time without circularity. As before though, it involves recognising the intricacies of cognition and the role of the mind. In every part of my examination of time and its idea then, the role of the mind is truly significant.

As above, I do not pretend the interpretations offered here count as the final word on these matters nor that Hume can avoid every problem that arises in this part of his work. However, what does seem to be true is that there are far more complex and nuanced principles in play than is often assumed. I also propose that the details that emerge are of far more interest and merit than these sections have frequently been judged as containing. Seemingly straightforward principles become fuzzier and more complex, the role of the mind becomes more pronounced. Whatever else Hume's theory of time is, it is neither bumbling nor shallow. He seems well aware of and acutely sensitive to the challenges involved in formulating an account of time in all its complexity. If we are sensitive to this the reward is a more interesting, more innovative and, I suggest, more defensible theory overall.

1.3. The Relationship Between the Two Parts

One of the more interesting interpretive challenges in this area of Hume's work concerns not only the content of each part of his system but the relationship between the two parts themselves. In summarising his work on time and space in T 1.2.4. Hume tells us that:

> Our system concerning space and time consists of two parts, which are intimately connected together. The first depends on this chain of reasoning. The capacity of the mind is not infinite; consequently no idea of extension or duration consists of an infinite number of parts or inferior ideas, but of a finite number, and these simple and indivisible: 'Tis therefore possible for space and time to exist conformable to this idea: And if it be possible, 'tis certain they actually do exist conformable to it; since their infinite divisibility is utterly impossible and contradictory.
>
> The other part of our system is a consequence of this. The parts, into which the ideas of space and time resolve themselves, become at last indivisible; and these indivisible parts, being nothing in themselves, are inconceivable when not fill'd with something real and existent. The ideas of space and time are therefore no separate or distinct ideas, but merely those of the manner or order, in which objects exist: Or, in other words, 'tis impossible to conceive either a vacuum and extension without matter, or a time, when there was no succession or change in any real existence.[13]

The two parts then are "intimately connected" and the second part is presented as a consequence of elements of the first. Since there are such deep puzzles regarding the content of each part, reconsidering them results in reconsideration their relationship to each other. We are told they are connected, but in what way and in virtue of which elements?

In evaluating the two-part system, commentators have offered a number of views both on the content of each part and on the relationship between them, and it is not unusual to stress the apparent difficulties in unifying the two parts and explaining how they connect. Allison stresses a "deep tension" between them, Fogelin argues that the two parts have "opposite tendencies."[14] Fogelin suggests that Hume begins with a part-whole theory arriving at extensionless and durationless points and then, upon realising that these parts could never sum to a finite whole (for the reasons suggested above in relation to the composition problem), alters his approach in T 1.2.3. to a relational account of time. And yet, if this is so then it seems at odds with

[13] T 1.2.4.2; SBN 39-40.
[14] See Allison (2008) p. 60; Fogelin (1985) p. 35.

the way Hume presents and discusses the composition problem. Occurring immediately after his characterisation of his system of time and space as a two part one, he introduces the composition problem by stating "The first of these objections, which I shall take notice of, is more proper to prove this connexion and dependence of the one part upon the other, than to destroy either of them."[15] If his aim was to subtly shift focus in light of a tension revealed by this very problem it seems inexplicable why he would make this claim. Again, complex and interesting puzzles become apparent that tug at the interplay between epistemology and metaphysics for Hume.

In offering an account of each part I also aim to offer some illumination on the relationship between them. Certainly I think we should be motivated by Hume's contention that they are intimately connected and look for an interpretation that could make sense of this. I will suggest that a unified approach is available and that to gain a fully satisfying interpretation and understanding of either we must look to, and be informed by, the other. The connection between the two parts exists partly in virtue of their shared motivating commitments, many of which emerge in T 1.1. and have impact throughout both. What we finish with is a complex and interesting theory: a deliberately limited, but nonetheless powerful, metaphysical project and an epistemological investigation in which human nature and our very mode of cognition plays a central and significant role.

[15] T 1.2.4.3; SBN 40.

2. The Structure of Time: Hume's Arguments against Infinite Divisibility

2.1. Introduction

In T 1.2.1. and T 1.2.2. Hume forwards several arguments against infinite divisibility and, through this, his positive proposal of the nature of time and its moments emerges: that the complexity of durations is grounded in simple and ontologically fundamental moments. However, as noted above, how to understand Hume's arguments and their aims, as well as how to understand what principles motivate them has been an issue of great contention. In the next chapter I will examine in more depth the positive proposal and the challenges it faces. In this chapter I will focus on the arguments against infinite divisibility and their negative conclusions. Throughout my examination of this first part of Hume's two-part system, I will appeal to a re-evaluation of his methodology with the aim of shedding light on the puzzles that emerge.

In what follows I will draw out three arguments presented against infinite divisibility; the first two apply equally to space (though I will not discuss the second until the next chapter), the last is an additional argument intended only to apply to time. I present and consider the standard reading of Hume's first argument and its historic dismissal arguing that, should we read him as forwarding an argument against the very possibility of infinite divisibility in general, we will indeed be disappointed (and perhaps even confused) by the moves he makes. Next I will consider the strength of interpreting Hume as engaged in metaphysics. I focus on Holden's re-evaluation of Hume's first argument in light of an underlying commitment to actual parts. There are, I think, good reasons to understand Hume as being engaged in metaphysics and as being concerned with the composition of external objects rather than simply the phenomenal array. However, Holden's account itself fails to be explanatorily adequate if we are concerned to make sense of each of the three arguments against infinite divisibility. In particular I will argue that his approach does not do justice to either the first or the third arguments. Since my focus here is on time I am especially concerned to make sense of the

third and, if an account is available that can explain them both together, it is to be preferred.

Motivated by this, I strive to offer a more explanatorily adequate interpretation. In attempting this I am informed in part by Hume's claim that the two parts of his system of time and space (which, as discussed above, I take to concern the metaphysics and the epistemology of time and space, respectively) are "intimately connected."[16] I propose an alternative interpretation that uses elements of the second part of the system to illuminate moves he makes in the arguments of the first. However, what will emerge is a picture on which the fundamental driving force comes from the principles set out in T 1.1., in particular his rejection of abstraction by separation. I finish by arguing that the metaphysical commitments that motivate him here are not merely assumed orthodoxies of his time and so he does not simply beg the question against the proponent of infinite divisibility by assuming from the start things his opponents might be inclined to reject. Instead, on this reading, his arguments are motivated principally by core commitments derived from his empiricism and constrained by his concept of time. By arguing in this way I suggest we can not only avoid historic charges of blundering ineptitude, but also offer a richer explanatory story that shows that he is consistently motivated by fundamental commitments drawn from his epistemological standpoint.

2.2. Hume's "Lead" Argument

In introducing his arguments, Hume forwards his positive proposal as to the structure of time and space via a number of negative arguments against the infinite divisibility of finite extensions and durations.[17] As discussed above how to divide the discussion into arguments has been contentious: however, there is a recognisable tendency to focus on the first argument Hume

[16] T 1.2.4.1; SBN 39.

[17] As in all parts of this thesis, note that I will be using "time" and "duration," and "space" and "extension," as synonyms, just as Hume appears to. Note that in doing this Hume is not using "duration" in the more traditional sense, that is, as a measure of the unchanging as well as the changing. As will be discussed in this chapter (and others), in Hume's sense, both duration and time require a changing succession of moments.

offers.[18] Holden, for example, calls it his "lead" argument. Given this, in presenting the orthodox view on Hume's work in this area I will initially focus my discussion accordingly.

2.2.1. The "Lead" Argument and its Historical Dismissal

Hume's first argument can be formulated as follows:

> i. Whatever is capable of being divided *in infinitum*, must consist of an infinite number of parts" (T 1.2.1.2; SBN 26) […] Every thing capable of being infinitely divided contains an infinite number of parts. (T 1.2.2.2; SBN 29)
>
> ii. [T]he idea of an infinite number of parts is individually the same idea with that of an infinite extension;…no finite extension is capable of containing an infinite number of parts. (T 1.2.2.2; SBN 30)
>
> iii. [Therefore] no finite extension is infinitely divisible. (T 1.2.2.2; SBN 30)

Hume's argument relies on the impossibility of any finite thing containing an infinite number of parts on the basis that anything with an infinite number of parts must be infinitely large. Since no finite thing can be infinitely large, we must conclude that no finite thing can be infinitely divisible. Historically, this argument has tended to be read as applying equally to the bare mathematical possibility of infinite division and has been judged as being correspondingly weak. Here I will present three influential objections:

Firstly, critics oppose premise i. which maintains that anything capable of being infinitely divided must contain an infinite number of parts. Frasca-Spada notes that there are many excellent reasons for saying it is "entirely mistaken."[19] Fogelin damns it as amounting to a "conceptual confusion."[20]

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[18] For authors who focus on the first argument see Ainslie (2010), Baxter (2008), Flew (1976), Fogelin (1988), Holden (2002, 2004b), Laird (1932). For authors who put the focus on the other arguments see Broad (1961), Jacquette (1996), and Lennon (1985).
[19] Frasca-Spada (1990) p.397.
[20] Fogelin (1988) p.51.

Flew states that this "misguided premise" is "mistaken twice over" and "without qualification false."[21] He puts the core objection this way:

> [T]o say that something may be divided *in infinitum* is not to say that it can be divided into an infinite number of parts. It is rather to say that it can be divided, and sub-divided, and sub-divided as often as anyone wishes: infinitely, without limit. That this is so is part of what is meant by saying: 'Infinity is not a number!'[22]

Here Flew appeals to the idea of a potential infinity which Hume seems to have neglected. To say that something contains a potential infinity of parts is to say that it can be divided and that this division can continue *ad infinitum*: however, at any point in this division it will only contain a finite number of parts.

Secondly, commentators have also zeroed in on Hume's apparent contention that anything that contains an infinite number of parts must be infinitely large as found in premise ii. The rub here is that, although anything that contains parts of all the same size would be infinitely large, something that contains an infinity of proportional parts which diminish in size need not be. Fogelin, for example, presses this point:

> It is true that if we take a finite extension (however small) and repeat it ad infinitum, we will get an infinite extension. That, however, is quite beside the point, because the argument for infinite divisibility depends on the possibility of constructing ever smaller finite extensions, as in the sequence [½ , ¼ , 1/8, etc.] whose sum approaches, but does not exceed, 1.[23]

This objection to Hume's line of argument is particularly interesting because he actually notes the distinction between aliquot (same-sized) and proportional parts (parts which diminish proportionally) in a footnote, making this elusive comment: "[w]hether these parts be call'd *aliquot* or *proportional*, they cannot be inferior to those minute parts we conceive; and therefore cannot form a lesser extension by their conjunction."[24] From this,

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[21] Flew (1976) p. 260.
[22] Flew (1976) p. 260
[23] Fogelin (1988) p.51.
[24] T 1.2.2.2n1; SBN 30.

he dismisses the distinction between these two kinds of parts as "frivolous." This quick dismissal seems, at first blush at least, especially inappropriate since this is exactly the way that his opponents are most naturally inclined to press him.

Thirdly, commentators have also challenged Hume on the grounds that, along with these specific mistakes, he has failed to see a more general point about the coherence of the model of infinite divisibility itself. That is, the model proposed by infinite divisibility theorists is a coherent one even if we reject it: as such his attempts to find contradictions in the very idea of infinite divisibility in the abstract are woefully misplaced. Franklin puts it this way:

> The infinite divisibility of space and time is possible. (This is because there is a consistent model that incorporates infinite divisibility, namely the set of infinite decimals.) It follows that all supposed proofs of the impossibility of infinite divisibility, whether mathematical or philosophical, are invalid.[25]

Interpreted in the broadest sense, that is, as applying to the general model of infinite divisibility Hume's argument seems to contain some fairly obvious oversights, some made all the more baffling by the fact that he clearly recognised and appeared to understand the conception of parts that defenders of infinite divisibility might be inclined to counter his arguments with (that is, by appeal to proportional parts) and yet failed to see or ignored its consequences for his arguments. Interpreted in this broad sense his argument seems inadequate and his grasp of mathematics perhaps a little lacking.

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[25] Franklin (1994) p.87. Franklin defends Hume's arguments to the extent that the availability of a consistent model for space as not being infinitely divisible (something Hume aims to demonstrate) equally tells against those who suggest infinite divisibility is *a priori* demonstrable. Franklin takes the existence of consistent empirical models for both opposing sides to show that each will fail if they try to prove their point *a priori*. Hume was right then to argue that his opponents had failed to prove infinite divisibility to be demonstrable, however, he was wrong to call the opposing proofs he suggests demonstrable. For Franklin, empirical investigation alone can settle this dispute and so *a priori* demonstrations are misguided. For a review and critique of Franklin's view see Waxman (1996).

2.2.2. Holden's Metaphysical Re-evaluation

If we interpret Hume as forwarding an argument aimed at the very possibility of infinite division then we may be disappointed with the results and indeed confused by his line of argument. What could justify his rejection of proportional parts? What could justify the claim that anything infinitely divisible contains an infinite number of parts? Interpreted in this way his claims seem rather question-begging. However, there are good reasons not to interpret Hume as engaged in this kind of project. Instead of viewing his argument as aimed at the infinite divisibility of quantity in general, there has been a recent push towards contextualising his arguments, though which context they should be viewed in is debateable.

Firstly, some have argued that Hume's aim is only to account for phenomenal time and space. Motivated both by the apparently perceptual examples Hume gives, they see his as targeting the infinite divisibility of the experiential manifold.[26] Secondly, some have taken him to be engaged in a more metaphysical project. We might put more weight on his Hume's section titles, noting that he moves from discussing "The Infinite Divisibility of our Ideas of Space and Time" in T 1.2.1. to discussing "The Infinite Divisibility of Space and Time" in T 1.2.2. These commentators take Hume to be engaged in a metaphysical project aimed against the infinite divisibility of extended and enduring objects should they exist beyond our perceptions.[27] In what follows the methodology I argue Hume is employing suggests the second approach. I argue that, although the metaphysics Hume does is cautious, it is metaphysics nonetheless and the apparent division between phenomenal space and time and a spatio-temporal world should be noted. This route will require defence and it will receive it below. For now though I will consider what could be added by contextualising these arguments in either of these ways. That is, what strength can be afforded to them if we no longer view Hume's arguments as aimed at infinite divisibility in the abstract and instead see them as focused on the possibility of infinitely

[26] For commentators who argue in this way see Falkenstein (1997) and Jacquette (1996).
[27] For commentators who attribute this approach to Hume in some form see Baxter (2008) especially chapter 2, Holden (2002), Laird (1932) pp. 67-8.

dividing real extensions and durations (construed either phenomenally or in terms of an external world of physical things).

Firstly, I will look at Holden's account which argues Hume's arguments must be seen as making metaphysical claims about physical quantities with concrete, actual parts.[28] In light of these points he rejects the dismissal of the lead argument as discussed above. To him, Hume is "a clear case of a major Enlightenment philosopher charged - quite unjustly […] - with the most grotesque mathematical blundering."[29] Certainly it would be presumptuous to refuse to accept Hume is capable of grotesque blundering if there were overwhelming evidence that he were engaged in it. However, that he recognised and so was certainly aware of some of these responses to his arguments should surely give us pause for thought if only in virtue of a principle of charity.

In his re-evaluation, Holden's core claim is that Hume's arguments must be viewed in the context not of a critique against infinite divisibility in the abstract but instead in light of a debate over the nature and composition of actual physical things:

> The early modern debate depends crucially on a body of metaphysical doctrine concerning the 'filling' or 'stuffing' of actual physical continua - a body of doctrine that dominates the natural philosophy of the period and that sets the background for the debate over infinite divisibility…once we appreciate this, we will see that the paradoxes are not so readily dismissed.[30]

Holden argues we must understand Hume as writing against the background of the distinction between actual and potential parts. This distinction sets out two ways of understanding the metaphysical structure of material things. In order to make his account clear we need then to first clarify the distinction between actual and potential parts. Construed in terms of actual

[28] Holden (2002) is the most focused example of this as applied to Hume's philosophy. NB. Holden concentrates on the case of extension or space. However, there is good reason to think that Hume took duration or time to be equally an ordering of objects. To the extent that we are encouraged, and I think we should be, to see time as a sequence of existing things there is no reason why such an interpretation couldn't also be extended to time as well as space.
[29] Holden (2002) p. 4.
[30] Holden (2002) pp. 3-4.

parts then, any divisible entity is divisible in virtue of possessing parts and it possesses parts prior to any act of division. These parts are distinct entities and division merely unveils or discovers the structure that was inherent in the whole from the start so divisible wholes are complex prior to division.[31] An act of division, on this view, "merely *separates* [the parts], it does not *create* them."[32]

In contrast with this is the potential parts view, which has its roots in Aristotelian lines of thought. On this view the parts into which a body may be divided are merely potential until actualised by an act of division. We can characterise talk of parts in terms of talk of the modal properties of the whole but the whole itself is not a complex until divided. If we think in this way division creates or actualises parts, it does not discover them. As Holden puts it "the parts of bodies are merely possible or potential existents until broken down, but do not exist other than as aspects of the whole until a positive act of division actualizes them as so many independent entities."[33]

Armed with this distinction between actual parts and potential parts Holden argues we should reconsider Hume's "lead" argument and the objections raised against it. Firstly, we might think that the third objection fails. This objection was that, given there exists a coherent mathematical model for infinite divisibility, Hume was simply misguided when he argued the very notion of infinite divisibility is contradictory. If he was arguing this it seems the existence of a coherent model would be a problem for him. However, if we interpret him as arguing against the infinite divisibility of actual physical entities then this objection seems to fall wide of its mark. If Hume's target is not the infinite divisibility of quantity in general but the infinite divisibility of only one class of things, that is, concrete physical things, the fact that there is a coherent model for infinite divisibility is irrelevant. One benefit of reading Hume in this way then is that it provides one way of making sense of why he neglected to consider what would otherwise seem to be a rather

[31] A contemporary analogue of this view would be the doctrine of arbitrary undetached parts.
[32] Holden (2004b) p.2.
[33] Holden (2004b) p.2.

obvious counter-example; if this re-interpretation is correct, he did not consider it because it is not a counter-example. So, if we read him as aiming to offer a metaphysical account concerned with the possibility of infinitely divisible concrete existing things then perhaps the third objection can be dispelled.

We can also see that, if it is true that Hume was committed to an actual parts view of the world, premise i. of the lead argument makes more sense as well. Premise i. maintained that anything capable of being infinitely divided must contain an infinite number of parts. If Hume was committed to a conception of the structure of material things in terms of actual parts, this premise seems only to be the expression of that commitment. If division into parts is not a process of creating new parts but only of discovering the distinct parts already present in the whole, then something's being infinite divisibility does entail it has, before any act of division, an actual infinity of parts. If Hume was committed to a world-view where extended and enduring things have actual parts then he would presumably reject an objection grounded in the possibility of potential parts as at odds with this commitment. Of course, such a rejection without further defence might still strike us as unwarranted but at least on this way of seeing things we can explain why Hume would make it.

Consider now the second objection: that it is not the case that anything that contains an infinite number of parts must be infinitely large. Holden argues that a commitment to actual parts bears upon this as well. On a potential parts reading, it seems perfectly possible that a finite thing could contain an infinite number of parts. We might, for example, appeal to proportional parts, as Fogelin did above. If we think in terms of proportional parts then there seems no reason to think a finite thing could not be infinitely divisible, for we may divide and divide *ad infinitum* and this does nothing to contribute to the size of the divided entity. However, if one is committed to actual parts, one might not reason so quickly. To say that something is infinitely divisible is to say that is contains an actual infinity of parts. These parts are prior to the aggregate and, if they have any magnitude at all, the addition of

these parts would seem to create a greater sum. The addition of an infinity of such parts would indeed create something infinitely large. A commitment to actual parts may go some way towards making the claim of this premise plausible, however, I am hesitant to suggest that it fully accounts for it. In his discussion Holden does indeed bring in an additional element; he argues that Hume's commitment to simple ultimate parts comes in to play. It is worth looking at his reasoning more closely.

Holden suggests that we view Hume's second argument against infinite divisibility (T 1.2.2.3; SBN 30), as an argument aimed at providing support for premise ii. (that nothing finite can contain an infinite number of parts). I will not discuss the second argument in depth until the next chapter but in essence the argument relies on the position that complex things (being numbers of things) exist in virtue of the existence of simple things. Without these simple things, Hume suggests, we could never ground complexity. If one is committed to infinite divisibility, one rejects the idea that there are simples, instead at every level we always find complexes. So, if one is committed to infinite divisibility, one cannot allow for the foundational layer of simple things that ground the existence of the complex whole. As such, Hume rejects infinite divisibility and supposes that complex things exist in virtue of the existence of a simple bedrock layer of indivisibles. These indivisibles are ontologically foundational and act as the requisite grounds for the existence of the complex.

By using this second argument as support for the second premise of the first argument, Holden appeals to more than a mere commitment to actual parts then. Substituting in the additional idea that the actual parts are, for Hume, simple ultimate parts he points out that simple parts are, so to speak, all the same size. As a result of this he suggests that Hume is not able to go the way of proportional parts as proportional parts diminish in size. Given he cannot (or at least will not) appeal to proportional parts, Hume instead must say that no finite thing could have an infinite number of parts.

I have a three reservations with this treatment of the argument. Firstly an interpretive concern: if, as Holden suggests, Hume's commitment to ultimate parts rules out proportional parts whilst accepting aliquot ones, it is unclear to me why he would call the distinction between the two "frivolous." After all, if one accepts one formulation and rejects the other one might think it key to keep the two apart and make clear that they are different. Secondly, even if we reject proportional parts and suppose that any infinitely divisible thing exists in virtue of the existence of an infinitude of same-sized parts, this still does not seem to give us an infinitely large thing unless we also suppose these parts have some magnitude. Hume's moments are simple and possess no duration, his spatial parts are simple and so possess no extension. It is not clear that an infinite number of these would give you something infinitely large. Even if we allow Holden the addition of the second argument and the idea that the actual parts for Hume are simple ultimate parts, this still seems to fall short of explaining the second premise for it does not explain why a finite thing could not contain an infinite number of parts.[34]

My third concern is that Holden's way of viewing the second argument seems both somewhat unmotivated and potentially problematic. Holden states that the second argument is "clearly intended to support the second premise."[35] Each of Hume's arguments seems capable of standing alone and the second seems on equal ground with the first. It is possible that Hume intended the second argument as support for the second premise of the first but, if that is the case, he was not explicit about this. More troublingly perhaps is how question-begging the first argument seems to become if we treat it in this way. If we are meant to supplement the second premise of the first argument with the conclusion of the second argument, that is, with the idea that the parts we are to be concerned with are simple, ultimate parts, we seem to entirely beg the question against the infinite divisibility theorist. If

[34] In the next chapter I will discuss the interesting question of why Hume might think that simple moments which possess no duration could ever compose a duration. I will go on to argue that his theory has the resources to face this challenge (though I suggest it involves an appeal not to actual parts but to the intrinsic features of moments and parts themselves). Leaving that aside for now though, it still seems that a mere commitment to actual parts is not sufficient.

[35] Holden (2002) p.12.

we must suppose simple ultimate parts in order to argue against infinite divisibility it seems hardly worth making the argument for we have already employed in the premises something the proponent of infinite divisibility would entirely reject. If this is the reasoning Hume is engaged in then it seems so much the worse for him.

For these reasons I think Holden's reinterpretation fails to make sense of Hume's reasoning in the second premise of the first argument. However, to its credit, adopting this route does at least make sense of the first premise and seems also to see away the third objection regarding the coherence of Hume's project in general. Appealing to a commitment to actual parts may help to some extent then. Although such a commitment could only be called implicit at best (as Hume certainly does not make this commitment clear), if Hume was committed to a metaphysics of concrete entities in terms of actual parts we might think his argument makes more sense. We might, however, ask why such a crucial element as this commitment would be left merely implicit. Holden's response is to argue that a commitment to actual parts was reasonably well accepted at the time, at least as a conception of matter if not of space itself. Such a view had largely usurped the broadly Aristotelian approach which is better aligned with potential parts and Holden cites thinkers including Bayle, Descartes, Isaac Barrow, Leibniz, and Newton in support of this claim.[36]

For Holden then, Hume's arguments should be read alongside an implicit commitment to actual parts, a commitment that would, Holden suggests, be shared by many of his readers. If one takes an entity to be composed of distinct actual parts, Hume's argument aims to show that this entity cannot also be infinitely divisible. And if we interpret Hume in this way then his argument seems to make more sense: taking any finite extension, the potential parts theorist might maintain that it is possible for it to be infinitely divisible because, though any process of actual division will be finite and give one a finite number of parts, there is no end point to the possible divisions and so anything finite contains a potential infinity of parts. The

[36] For Holden's defence of this see Holden (2002) especially pp. 7-11 and Holden (2004a) pp.145-164.

actual parts theorist can then respond that, for it to be possible that the process of division continue *ad infinitum*, it must be possible for there to be an infinite number of parts in the thing divided. If it is not possible for any finite thing to contain an actual infinity of parts, it is equally impossible for there to be finite things which are infinitely divisible.

2.3. Two Problems of Explanatory Adequacy

Hume does not explicitly state a commitment to the doctrine of actual parts. In the later parts of this chapter I will give my reasons for withholding such a view from him. However, for now it is worth noting that, if this was his commitment, Holden has offered us a route to viewing Hume's project as metaphysical and grounded by metaphysical commitments and this in turn allows us a means to explain why seemingly obvious mathematical objections were ignored. Regardless of whether the resulting arguments are sufficient to convince, at least on this reading they make sense and we do not have to attribute such serious mathematical ineptitude to him.

However, we might still worry that the arguments seem somewhat unconvincing. Unconvincing enough, I suggest, for us to return to the text seeking a deeper explanation. To elaborate on this there are a couple of worries that I want to stress here. Firstly, an interpretive critique which strikes me as damning given Holden's aims: that a commitment to actual parts does not explain Hume's reasoning in his arguments. I discussed above the concern that appeal to actual parts alone was not sufficient to explain his reasoning in the first, "lead" argument. My contention was that in order to explain why something that had an infinite number of parts must be infinitely large we required not only a commitment to actual parts but also a commitment to those parts possessing properties that would allow them to compose an infinitely large aggregate by addition. This concern with the explanatory adequacy of a mere appeal to actual parts in explaining the first argument seems further strengthened by the fact that a commitment to actual parts also seems questionably at best in explaining Hume's third

argument which is concerned with the infinite divisibility of time, which I will now turn to.

As mentioned above, how to cut Hume's discussion into arguments is contentious. To make my position explicit: I take the "lead" argument discussed above to be the first of three offered. The second I take to be the argument Hume attributes to Malezieu which I will discuss in the next chapter. These first two arguments, though tending to be explored in terms of spatial examples, are said to apply equally to time. However, in the case of time we are also offered an "additional" argument, set out in T 1.2.2.4. One might reasonably think this argument implies something special about the nature of time in contrast to the nature of space and, indeed, that is how Hume presents it. The argument relies on the idea that, unlike the parts of space, the parts of time (that is, the moments) cannot coexist.[37] By arguing that infinite divisibility entails coexisting moments Hume forwards a *reductio* against the proponent of infinite divisibility. However, I contend that merely supposing a commitment to actual parts cannot explain his reasoning here. As such, if we are interested in accounting equally for his account of time as well as of space, a commitment to actual parts offers only an incomplete explanation of Hume's arguments. To draw this out it is worth giving Hume's third argument in full:

> 'Tis a property inseparable from time, and which in a manner constitutes its essence, that each of its parts succeeds another, and that none of them, however contiguous, can ever be co-existent. For the same reason, that the year 1737 cannot concur with the present year 1738, every moment must be distinct from, and posterior or antecedent to another. 'Tis certain then, that time, as it exists, must be compos'd of indivisible moments. For if in time we could never arrive at an end of division, and if each moment, as it succeeds another, were not perfectly single and indivisible, there would be an infinite

[37] The extent to which space and time actually are disanalogous cases here is interesting. As will be discussed in chapters 4 and 5, so long as we frame the question in a genuinely analogous way, we might think there is problem for space here too: just as the parts of time cannot coexist, i.e. exist in the same time, so to the parts of space cannot coexist in the sense of existing *in the same place*. The parts of space can coexist in time and the parts of time can coexist in space (i.e. an event consisting of different moments can unfold in one and the same place), however, neither can coexist in the other sense. Hume appears to neglect to note this and presents space and time as disanalogous in spite of this. Thanks to Jasper Reid for highlighting this point.

> number of co-existent moments, or parts of time; which I believe will be allow'd to be an arrant contradiction.[38]

Holden does not consider this third argument, indeed, as mentioned above, it receives very little discussion in the literature. However, if, as Holden suggests, it is a commitment to actual parts that is the covert driving force in Hume's arguments we might think that this commitment should be able to help us explain this argument too. Here I will suggest some reasons for thinking it cannot. The core question seems to be why it is that Hume thought that the coexistence of moments was a contradiction. I will argue that a commitment to actual parts does not seem to account for this in that a commitment to actual parts does not rule out that the actual parts in an entity overlap or, in time, coexist. If, as Holden suggests, we see the doctrine of arbitrary undetached parts as a contemporary analogue of the actual parts doctrine this becomes clear: there is no contradiction in supposing that the actual part which is the cat's head and the actual part which is the cat's whiskers at least partly overlap and, so to speak, coexist.

To be fair we should ensure that we are exploring a case of temporal parts but again, it does not seem that any contradiction arises. Within the year of 1983 we can discern the actual parts which are the month of February and the day of the 26th. These actual parts partly overlap and, on the 26th of February, the day, the month, and the year all, to use Hume's terminology, coexist. However, Hume tells us the coexistence of the moments of time is an "arrant contradiction."

Merely supposing actual parts does not seem to be enough then. However, given Holden's approach above, we can imagine a response he might be inclined to make and whether that would be stronger. As discussed above, Holden has already employed the second argument defending simple ultimate parts to make sense of the first argument and we might do that again here. If we take the relevant actual parts to be the simple ultimate parts then we could reject the counterexample of the day, the month and year coexisting. If the actual parts are the ultimate parts then they all exist on the

[38] T 1.2.2.4; SBN 31.

same foundational level for they are the simple, indivisible, ontologically basic elements of durations. The day, the month, and the year are not, so they are not an appropriate analogy.

I think this response has some merit. If we limit our thinking to the simple ultimate parts perhaps it is a given that, since there just are so many distinct cuts you can make at the foundational level, there is no coexistence of moments. Equally, since these parts are simple we might reason that there can be no question of them overlapping. As Hume notes later in T 1.2.4., as they possess no parts simples cannot overlap at all without completely overlapping and that seems to amount to the annihilation of one by the other.[39] Hume does explain why simple things cannot overlap then, but only much later. If we suppose a commitment to ultimate parts, and we fill in the results of this later argument, it seems we could explain why the parts of time do not coexist.

Although this response gets us to the right place, it seems to do it in a rather round-about manner. It involves an appeal to ultimate parts which, as before, seems to involve attributing a rather question-begging line of reasoning to Hume. Furthermore, Hume's given example is of years which he says cannot coexist, ultimate parts do not seem to illuminate that. This appeal also requires us to have Hume only eventually giving us support for this claim much later in his discussion, two sections after the argument. It seems a cumbersome explanation of his reasoning here to employ this later point. As a final concern, although bearing in mind that simples cannot overlap would allow us to explain why the moments of time do not coexist, it does not quite seem to explain why their coexistence is a *contradiction*. Hume stresses the impossibility of the parts of time coexisting; it is called an "arrant contradiction." Merely supposing a commitment to actual parts does not explain this but even if we also substitute in an additional supposition of ultimate parts we do not seem to reach this very strong claim of contradiction. Again then, an analysis in terms of actual parts does not seem to be sufficient in explaining Hume's reasoning. This third argument seems

[39] T 1.2.4.6; SBN 40-1.

to tell us it is something special about the nature of time that means its parts (and not even just its simple momentary parts) cannot coexist, but Holden's route does not give us this result. If we can, it would be better to find an interpretation that addressed all these issues. Fortunately I think one is available.

I said above I would offer two challenges. The first is the summation of these interpretive worries: that it is not clearly explanatorily adequate in either of the arguments to merely appeal to actual parts. The second challenge is more critical: even if an appeal to actual parts were explanatorily adequate, it is not clear that it strengthens Hume's arguments themselves unless independent motivation for accepting actual parts is given. I should stress that Holden recognises this, indeed, he thinks the most effective line of objection to Hume's argument involves adopting a potential parts standpoint which would simply undermine an argument that relied on assuming actual parts from the off. Hume may have thought this argument was strong because he was committed to actual parts: however, if no justification for actual parts is given, such an argument will feel fatally question-begging to a proponent of potential parts. There seems something unsatisfying in allowing an underlying commitment which is neither stated nor defended to do so much work in explaining Hume's reasoning.

In what follows I will argue for an interpretation which brings into the fold some additional elements and, in so doing, I reinterpret Hume as forwarding a more complex line of attack than a mere commitment to actual parts would allow. I believe in doing this we also find something more critically defensible. Motivated by these concerns I will finish this chapter by aiming to provide a more inclusive interpretation which is sensitive to these requirements. I will argue Hume's commitments are well grounded in his epistemology and his own brand of empiricism. As such, not everyone will find them palatable. However, they are explored and defended and so he is not merely adopting without question an assumed orthodoxy of his time.

2.4. Hume's Conditional Metaphysics

In making my case I will firstly consider Hume's stated methodology. I will argue this gives us good reason to see Hume as engaged in a metaphysical project, albeit one strongly restrained by his epistemology and commitments he presents in T 1.1. To the extent that his arguments are metaphysical and aimed at a concrete external world, should it exist beyond our perceptions, I suggest we have reason to contextualise them in a way that means that the broadest objection that Hume fails to see that infinite divisibility admits of a coherent model does not apply. This removes the first barrier to the adequacy of his arguments against in the same manner that Holden and others have.

In reconsidering his metaphysical methodology here I will take seriously Hume's claim that the two parts of his system concerning time and space (the metaphysics and the epistemology, respectively) are "intimately connected."[40] Spurred on by this I will use the second part of Hume's system to illuminate the problem and to fill out an interpretation of the nature of time and its moments that goes beyond a structural commitment to actual parts and tells us something of the nature of the parts of time themselves. I will argue that viewing moments in this way allows us to explain Hume's reasoning in the third argument as well as the first.

Having shown that a unified interpretation is available that makes sense of both the first and the third arguments I will finish by addressing the challenge that Hume begs the question against a potential parts theorist by proceeding with a parts-first methodology. I argue that, although his approach does rely on a parts-first conception of the world, this is not in virtue of a mere assumption of actual parts. Instead we can explain Hume's methodology by appeal to deeper principles inherent in his account. This might explain to some extent why such an apparently important point as a commitment to actual parts could remain unstated: because the real driving force here is not such a commitment at all. Instead we can account perfectly well by appeal only to the principles set out in T 1.1., principles and

[40] T 1.2.4.1; SBN 39.

arguments that Hume does make perfectly explicit and defends with argument. To the extent that these principles are defended in arguments, not mere assumptions, he does not then simply beg the question.

2.4.1. Hume's Metaphysical Methodology: Ideas as Adequate Representations

To begin then I will say more to defend the view that what Hume is fundamentally engaged in is metaphysics when he forwards his arguments against infinite divisibility. And, indeed, in the metaphysics of a world beyond our perceptions, should there be one.[41] Such a view is not uncontentious. Motivated by Hume's apparent agnosticism regarding the existence of an external world, and his claim that we cannot conceive anything "specifically different" to perceptions, many are inclined to interpret him as a phenomenalist. In spite of his apparent dismissal of the phenomenalist position as one held by only the most "extravagant sceptics" he does seem to accept that direct experience is limited to phenomena:[42]

> Now since nothing is ever present to the mind but perceptions, and since all ideas are deriv'd from something antecedently present to the mind; it follows, that 'tis impossible for us so much as to conceive or form an idea of any thing specifically different from ideas and impressions. Let us fix our attention out of ourselves as much as possible: Let us chace our imagination to the heavens, or to the utmost limits of the universe; we never really advance a step beyond ourselves, nor can conceive any kind of existence, but those perceptions, which have appear'd in that narrow compass. This is the universe of the imagination, nor have we any idea but what is there produc'd.[43]

Perceptions are seemingly the only objects of experience. If there exists a world beyond them we seem to be epistemically cut off from it in an important way. If I am to maintain, as I do, that the arguments of T 1.2.2. are intended to restrain the possible nature of any world beyond perceptions,

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[41] The conditionality of the "should there be one" part is important. I will say more to defend this in what follows but broadly, although I Hume to remain officially agnostic about the reality of an external world, I also take him to think us capable of concluding various facts about the possible ways it can be structured if it does, in fact, exist.
[42] T 1.3.2.49; SBN 214.
[43] T 1.2.6.8; SBN 67-8.

there must be reasons to think both that Hume was willing to countenance the existence of an external world and that he thought there was a way to bridge this epistemic gap such that we could be in a position to say anything positive about it. The interpretation I forward of T 1.2.1. involves him doing both these things.

The discussion of T 1.2.1. "Of the Infinite Divisibility of our Ideas of Space and Time" provides the groundwork for T 1.2.2. "Of the Infinite Divisibility of Space and Time." And this might at first seem surprising. To the extent that the second section is apparently aimed at space and time themselves, beginning with a consideration of our ideas of space and time might seem an unusual route. However, this starting point does important work. Not least because the discussion that follows appears to involve an implicit but notable appearance/reality divide.

Hume begins by noting some apparent epistemic limitations which we face in investigating the substructure of the world. Our senses "represent as minute and uncompounded what is really great and compos'd of a vast number of parts."[44] We can only perceive at such a level and yet nature is capable of "prodigious minuteness" seemingly far beyond that level.[45] Our senses, we might think, are simply too blunt an instrument for any investigation into the structure of the world since "sound reasoning convinces us that there are bodies *vastly* more minute than those, which appear to the senses."[46] And this seems to be a limitation that applies equally to investigation of the smallest moments of time as it does to the ultimate parts (should there be any) of space. Consider his appeal to the example of the whirling coal:

> If you wheel about a burning coal with rapidity, it will present to the senses an image of a circle of fire…because 'tis impossible for our perceptions to succeed each other with the same rapidity, that motion may be communicated to external objects…we have no notion of time, even tho' there be a real succession in the objects.[47]

[44] T 1.2.1.5; SBN 28.
[45] T 1.3.1.4; SBN 71.
[46] T 1.2.4.23; SBN 48.
[47] T 1.2.3.6; SBN 35

In this case our senses are not able to pick up on the real succession in the object, that is, the complexity of the situation outruns our sense faculties. Comments such as these appear to implicitly recognise a world of some description beyond our perceptions that is spatially and temporally complex beyond that which we can perceive.

Hume also presents our capacity to discern in thought as being limited in an analogous way, that is, we are not capable of infinite intellectual discernment either: "whatever we may imagine of the thing, the idea of a grain of sand is not distinguishable, nor separable into twenty, much less into a thousand, ten thousand, or an infinite number of different ideas."[48] Just as we are incapable of any very great (and far less infinitely great) degree of sensory perception, we are equally incapable of any very great refinement of ideas. Hume notes that, as regards both ideas and impressions, the mind arrives fairly quickly at a smallest perception and we seemingly are stuck there: "the imagination reaches a *minimum*, and may raise up to itself an idea, of which it cannot conceive any sub-division, and which cannot be diminished without a total annihilation."[49]

Although his comments here certainly provide reasons to suppose our perceptions are not infinitely divisible, they equally seem to provide support for thinking that our perceptions are not even as refined as the things in the world. Thus a form of appearance/reality divide appears to be in play between our perceptions and something external to those perceptions: the world, whatever that turns out to be. In spite of his official agnosticism regarding the existence of the external world, there is a thread of commitment to something beyond perceptions that runs through this section and its discussion. Certainly, Hume accepts in terms of our beliefs that we are incapable of ridding ourselves of a belief in an external world entirely and so one might expect it to inform our thinking in this area. He notes that "'tis in vain to ask, Whether there be body or not? That is a point,

[48] T 1.2.1.3; SBN 27.
[49] Ibid.

which we must take for granted in all our reasonings."[50] However, in light of the comments above one might be tempted to conclude that, tempting though this belief is, we are ill-equipped to investigate the world, especially in terms of its substructure. If we are unable to form different ideas of the grain of sand and something ten thousand times smaller than it, we might think that we are simply in no position to proceed into an examination of the smallest parts of the world, or indeed into whether the world admits of smallest parts at all.

However, Hume's conclusion is more optimistic: He accepts that we are unable to experience the smallest parts of the world should there be any. However, he does suggest that our perceptions are capable of serving as so-called "adequate representations" of these smallest things. The smallest possible things, should the world be such as to have a smallest possible level, will be the simple things, those things which are indivisible. And, in virtue of their simplicity, our smallest perceptions are perfectly well able to represent this lowest level, should it exist, for these perceptions are themselves simple. Hume concludes that: "Nothing can be more minute, than some ideas, which we form in the fancy; and images, which appear to the senses; since there are ideas and images perfectly simple and indivisible."[51] Insofar as they are simple, our perceptions can enable us to represent hypothetical simples we cannot experience.

The lesson Hume seems to propose from this is to ensure we proceed in our investigations with caution. To recognise the respects in which our perceptions are capable of representing accurately and the respects in which they could lead us astray. To the extent that they are simple our simple perceptions allow us to think about the smallest possible things if there are any and, when a perception is an adequate representation of an object, it can allow us a kind of access to objects that we cannot experience. Thus Hume begins the next section (T 1.2.2.) with a general principle summing the results of T 1.2.1. and this principle will guide his investigation from here on in:

[50] T 1.4.2.1; SBN 187.
[51] T 1.2.1.5; SBN 28.

> Wherever ideas are adequate representations of objects, the relations, contradictions and agreements of the ideas are all applicable to the objects; and this we may in general observe to be the foundation of all human knowledge. But our ideas are adequate representations of the most minute parts of extension; and thro' whatever divisions and subdivisions we may suppose these parts to be arriv'd at, they can never become inferior to some ideas, which we form. The plain consequence is, that whatever appears impossible and contradictory upon the comparison of these ideas, must be really impossible and contradictory, without any farther excuse or evasion.[52]

This is the epistemological groundwork that underlies Hume's metaphysical methodology. When our investigation is grounded in ideas which adequately represent their objects in the respect that matters for our reasoning, we can proceed. We can do metaphysics then, but we must proceed from what we do have access to (our perceptions) and be cautious in carrying any results over to the world. Adopting this route does not involve violating Hume's comments above that we cannot conceive of anything specifically different to our perceptions. To the extent that we conceive only perceptions we suppose nothing illegitimate. These simple perceptions though provide a way to think about simple things more generally, including the simple things in the world, should there be any.[53]

Importantly, reading T 1.2.1. in this way does not involve supposing that our ideas represent external objects (should there be any) in any other respects than their simplicity. Though we have reasons to suppose our ideas may adequately represent impressions, we do not have reasons for imagining our impressions to be capable of adequately representing external objects in

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[52] T 1.2.2.1; SBN 29.

[53] When Hume states that "my intention never was to penetrate into the nature of bodies, or explain the secret causes of their operations…we can never pretend to know body otherwise than by those external properties, which discover themselves to the senses" (T 1.2.5.25; SBN 64) we can take him seriously. For he is not suggesting that we can know bodies by any other means. In fact, this reading of adequate ideas is not in conflict with this view but an instance of it, for here we pretend to knowledge of body through the external properties which discover them to the senses. When Jacquette cites this passage in his critique of the presence of an appearance/reality reading he states that "Hume is officially skeptical about idealism and realism...from a skeptical, empirically circumspect methodology we can only look to our impressions and ideas for truths about the world." (1996) p. 73. I suggest this is exactly right and yet, I do not think it tells against what I propose here. In certain limited senses, I take it that Hume thought we were capable of using our ideas to think about things that exist beyond them, should there be any such things. This point will be discussed and defended further in chapters 3 and 8.

many respects. In his discussion of adequate representations and the problem of deriving conclusions regarding the separability or connections between external objects from the separability of our impressions and ideas, Kail highlights this apparent unknowability of whether our perceptions are adequate and argues Hume was aware of and sensitive to this.[54] He proposes this should be viewed as an epistemic roadblock rather than a metaphysical one (that is, a result of a lack of the kind of epistemic access to external objects rather than the sort of failure of representation that might be thought to occur if there were nothing to represent) and highlights Hume's avocation of caution in light of our inability to know if our impressions are adequate representations or not. However, even Hume's cautious notes seem to contain a kind of optimism:

> As to those impressions, which arise from the senses, their ultimate cause is, in my opinion, perfectly inexplicable by human reason, and 'twill always be impossible to decide with certainty, whether they arise immediately from the object, or are produc'd by the creative power of the mind, or are deriv'd from the author of our being. Nor is such a question any way material to our present purpose. *We may draw inferences from the coherence of our perceptions, whether they be true or false; whether they represent nature justly, or be mere illusions of the senses*. [My italics].[55]

Hume is clearly wary of the unknowability of whether our impressions represent the world well or badly. It seems we are in no position to know. However, in spite of this, we still may draw certain inferences. This suggests to me that, when employed cautiously and in only limited respects, Hume allows us use of these perceptions as tools for thinking about an external world.

We cannot ignore this caution though. In light of it, I suggest two things we need to keep in mind: firstly, as I will elaborate on below, our use must be conditional. Secondly, we can take perceptions to represent only in certain limited respects. In his discussion at T 1.2.1. I take Hume to suggest that, in respect of their simplicity, our simple perceptions allow us a handhold on

[54] For more discussion of adequate representations, and the difficulties they present see Kail (2007a).
[55] T 1.3.5.2; SBN 84.

thinking of simple things more generally, which include things which may be beyond our experience. However, in this case it is in this respect only that he allows us to employ our perceptions. In virtue of their simplicity they serve as adequate representations of simple things. However, in many other respects, perceptions will not allow us the least grip on external objects, should there even be any. Hume highlights not just the difficulty but the danger of moving beyond perceptions, suggesting that "[i]f we carry our enquiry beyond the impressions to the appearances of objects to the sense, I am afraid, that most of our conclusions will be fill of scepticism and uncertainty."[56] I agree. However, I am inclined to emphasise the "most." In some limited respects, I take Hume to be accepting of a kind of use for perceptions in virtue of the ways in which they can adequately represent. This use is limited, but it affords us a tool here nonetheless.[57]

Interpreted in this way, T 1.2.1. provides a methodology for proceeding in metaphysical investigation. It also supports a reading of T 1.2.2. as an investigation into space and time (as Hume's section title implies) should they exist externally to our perceptions, not merely our ideas of space and time. This section then both provides reasons to think there is an appearance/reality gap and a tool by which we might cross that gap. To the extent that our ideas are adequate representations they can help us think about the world. I suggest we read Hume's methodology as conditional, as suggested by the "wherever" in "Wherever ideas are adequate representations of objects, the relations, contradictions and agreements of the ideas are all applicable to the objects." We are not offered a guarantee that our perceptions are adequate representations in all respects and indeed are offered evidence that they are not truthful representations in some respects (hence their representing as "minute and uncompounded what is really great and compos'd of a vast number of parts."[58]). The parts of the world need not bear any other qualitative resemblance to our ideas, however, in some limited respects are perceptions are tools we can use, as such, we are

[56] T 1.2.5.26n12.2; SBN 639.
[57] For further discussion of adequate ideas in Hume and some links and contrasts between his use and the use of them by Descartes and Locke, see Ainslie (2010).
[58] T 1.2.1.5; SBN 28.

not barred from engaging in metaphysics nor pressing our investigations deeper.

Returning briefly to the first argument, which occurs immediately after Hume has made his claim about ideas as adequate representations, we can see that he does indeed adopt this use of perceptions. Specifically here it is used to illustrate his contention that nothing finite could contain an infinite number of parts: "[t]hat this latter supposition [that a finite thing have an infinite number of parts] is absurd, I easily convince myself by my consideration of my clear ideas."[59] Hume proceeds in the following way:

> I first take the least idea I can form of a part of extension, and being certain there is nothing more minute than this idea, I conclude, that whatever I discover by its means must be a real quality of extension. I then repeat this idea once, twice, thrice, &c. and find the compound idea of extension, arising from its repetition, always to augment, and become double, triple, quadruple, &c… were I to carry on the addition in infinitum, I clearly perceive, that the idea of extension must also become infinite. Upon the whole, I conclude, that the idea of an infinite number of parts is individually the same idea with that of an infinite extension; that no finite extension is capable of containing an infinite number of parts; and consequently that no finite extension is infinitely divisible.[60]

I leave aside for now further explanation of whether Hume's thinking here can be justified, that is, how and whether such simple parts could possibly compose a greater aggregate by their addition. This concern is an interesting and complex issue that I will take up in the next chapter. For now though, we can see that Hume's methodology of investigating ideas is very much at the fore when he begins making his arguments against the infinite divisibility of space and time.

2.4.2. The Nature of Parts and Moments

In the above quotation I suggested we saw an instance of this particular methodology. Returning to the argument being forwarded now, this quotation also seems to show us something else as well. The role that the

[59] T 1.2.2.2. SBN 29.
[60] Ibid.

idea of a part is playing seems to trade on something more than just its distinctness within the whole. Supposing actual parts will give you distinct parts, but Hume seems to require not only distinct parts, but parts with properties that enable them to compose aggregates by addition: we begin by thinking of a part and, from that idea and others like it, question what many parts would create. Hume does not tell us what the additional properties are but it is my contention that distinctness alone does not cut it.[61] Similarly, in the third argument we need to explain why it is that the coexistence of the moments of time is a contradiction: what it is about moments that means their coexistence is a contradiction? And why and how do several moments sum to a duration? These questions will be resolved in tandem. What seems required in order to address them is a deeper look into the nature of parts and moments.

In order to understand what a part of space or a moment of time must be, Hume turns as per his methodology to the consideration of our ideas. In this investigation a crucial role is played by his commitment to all ideas being particular. In order to illustrate the way this applies to the ideas of parts and moments it will be helpful to appeal to the arguments of T 1.2.3., which concern the ideas of time and space and the ways we come to form these ideas. Using these elements might seem problematic since they occur after the arguments which I am using them to understand. However, although this section provides the clearest exploration of the nature of parts and moments, the argumentation that provides us with this analysis of them occurs before any of the sections on space and time. Primarily it is presented in T 1.1.7. where Hume expresses his distrust of "abstraction by separation", that is, the formation of an abstract idea by the process of stripping away particular features until an indeterminate idea capable of representing a variety is reached. These commitments are at his disposal in T 1.2.1. and T

[61] This feeling that distinctness alone does not quite cut it might also arise when we look again at Hume's "frivolous" distinction: "[w]hether these parts be call'd *aliquot* or *proportional*, they cannot be inferior to those minute parts we conceive; and therefore cannot form a lesser extension by their conjunction." (T 1.2.2.2; footnote 1, SBN 30). Distinctness does not seem to enter the picture, what matters seems to be something about the part and its properties. Specifically, however we conceive it we must think of is as *something*, and the addition of something to something gives you something greater. For further discussion of this footnote, its derivation, and an alternative reading of its role, see Frasca-Spada (1998) pp. 33-38.

1.2.2. even if the fullest application of them to parts and moments does not occur until T 1.2.3. I suggest considering them here provide us with a way of understanding and illuminating his arguments against infinite divisibility.

There are two ways in particular I suggest his rejection of abstract ideas comes in to play in T 1.2.3. Firstly, it requires us when thinking of a part or a moment to maintain an idea of each as fully determinate in their properties. Secondly, it informs the very concepts of time and space, and sets certain bounds on the kinds of intrinsic nature that parts and moments must have in order to collectively instantiate extensions and durations.

Firstly then, Hume's prescribed methodology had us begin with ideas and use them as a tool for thinking about things beyond ideas. And Hume follows Berkeley in his commitment to all ideas being particular and fully determinate in their quantities and qualities. Taking any given idea, if we strip away its particular properties then we lose the idea itself. This is a thought that drives his rejection of abstraction by separation but it also means we must think of ideas as propertied in order to think of them at all. In light of this, in order to think of a part or a moment, even when we think of a part or moment in general, we must nonetheless think of some particular, and this particular will be fully determinate in its properties.

This comes to the fore in the discussion of T 1.2.3. In the case of extension Hume highlights the necessity of the experience of extension being an experience which has certain qualities in order to count as an experience of extension at all. The same goes for experiences of time. Crucially, this requirement means our ideas of the parts of space and the moments of time must also be certain ways:

> There is nothing but the idea of their colour or tangibility, which can render them conceivable by the mind. Upon the removal of the ideas of these sensible qualities, they are utterly annihilated to the thought or imagination…The same reasoning will prove, that the indivisible moments of time must be fill'd with some real object or existence, whose succession forms the duration, and makes it be conceivable by the mind.[62]

[62] T 1.2.3.15-17; SBN 38-9.

And later: "[t]he parts, into which the ideas of space and time resolve themselves, become at last indivisible; and these indivisible parts, being nothing in themselves, are inconceivable when not fill'd with something real and existent."[63]

Applying this to the first "lead" argument of T 1.2.2. is illuminating. We begin by considering our ideas, namely the least idea we can form. If this idea is an adequate representation of the smallest possible part of the world then we can consider it and see if anything follows regarding those smallest parts. But when we consider this idea of a part we find that we cannot think of a part at all (or anything else for that matter) unless we think of it as having some particular nature, that is, some particular properties. Our idea of a spatial part need not be blue, or red or green, or even coloured (so long as it is tactile). However, if we do not think of it as having some properties (be they visual or tactile) we lose the idea of a part entirely.

When we further consider our idea of a part, we find that these qualities make these parts little somethings, and two little somethings make a larger thing. We might think this is exactly his point when he discusses how the union of a blue and a red point create an extended, two-tone complex.[64] The qualities of these ideas of the smallest parts allow them to form sums or aggregates and, if we keep adding them, the aggregate will grow. If we were capable of adding ideas to our bundle infinitely (though Hume argues in T 1.2.1. that we are not) then we would have an aggregate of infinite size. This, I suggest, is the reasoning that Hume is engaged in when he forwards his first argument. The distinctness of the parts is key but they are distinct in virtue of their intrinsic properties.

That their distinctness is reliant on their properties is even clearer in the case of the moments of time. Hume tells us that our ideas of time and space are ideas of the "manners of appearance," "manner of disposition" or "order of arrangement" of existing things: "[t]he idea of time is not deriv'd from a

[63] T 1.2.4.2; SBN 39-40.
[64] T 1.2.4.7; SBN 41.

particular impression mix'd up with others, and plainly distinguishable from them; but arises altogether from the manner, in which impressions appear to the mind, without making one of the number."[65]

Time is not a sixth impression, distinct from the five notes played on the flute. Instead the idea of time is the idea of the succession of notes. Time, for Hume, is "nothing but the manner, in which some real objects exist."[66] Applying his rejection of abstraction by separation to our ideas of moments it seems that our idea of a moment, in itself, is nothing over and above what exists within it. For this reason, any thought of a moment will be a thought of some particular grouping of coexistents (whatever exists at that time). We can form a functionally abstract idea of a moment by association in virtue of perceived resemblance as we can with other general ideas, but our idea of any particular moment is nothing over and above the idea of the things that exist at that time. Each idea of a moment then must possess determinate properties, it must be an expression of some existing things.

We also see in the above that succession, conceived of in terms of change, is integral to the concept of time or duration, indeed, Hume holds that nothing unchanging can really be called temporal:

> [T]ime, in a strict sense, implies succession, and that when we apply its idea to any unchangeable object, 'tis only by a fiction of the imagination, by which the unchangeable object is suppos'd to participate of the changes of the co-existent objects, and in particular of that of our perceptions.[67]

And

> The ideas of space and time are therefore no separate or distinct ideas, but merely those of the manner or order, in which objects exist: Or, in other words, 'tis impossible to conceive either a vacuum and extension without matter, or a time, when there was no succession or change in any real existence.[68]

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[65] T 1.2.3.10; SBN 36.
[66] T 1.2.4.28; SBN 64.
[67] T 1.4.2.29; SBN 200-1
[68] T 1.2.4.2; SBN 39-40.

An idea of time without change is, in quite a strong sense, simply not an idea of time. In order that we have an idea of time or duration then we must have ideas of (at least) two moments and these moments must differ. Only if there is difference could the moments collectively instantiate the successiveness that is conceptually required by the idea of time Hume embraces. Given that the idea of a moment is nothing over and above the idea of a set of existing things, a difference between two moments means we require a difference in what exists in those moments.

Although these comments are stated in the context of our *ideas* of time and space, if my interpretation of T 1.2.1. is correct then these ideas are also the only tools we possess in order to think about time and space themselves. If our ideas are the only way we can hope to approach questions about the world then they are also our best bet in saying well-grounded things about that world. Not only are these our only tools then: it also seems to be the case that our very ideas cannot help but set certain bounds on what we seek in our investigation. Specifically, on what can be appropriately construed as spatial or temporal given our understanding of those concepts. Hume tells us that

> the idea of duration is always deriv'd from a succession of changeable objects, and can never be convey'd to the mind by any thing stedfast and unchangeable. For it inevitably follows from thence, that since the idea of duration cannot be deriv'd from such an object, it can never in any propriety or exactness be apply'd to it, nor can any thing unchangeable be ever said to have duration.[69]

Our idea of time is derived from successions and can only be applied appropriately to certain kinds of structures, namely changing, successive ones. The idea of time is nothing over an idea of successiveness so to apply such an idea to something unchanging is incoherent. These are conceptual claims, but they seem to impact on the possible nature of the external world as well: if this is what our concepts mean, then it is simply mistaken to imagine that our concept of time could have application to a world that is not of this sort. As such, if the world is to be considered as temporal at all,

[69] T 1.2.3.11; SBN 37.

that is, as an appropriate subject of that concept, then it must also have this structure. It remains open of course that the world does not have this structure, in which case our concept of time is inapplicable to it but, if that is the case, that also means the world is not temporal. In order to think of the world as temporal, we must think of it as successive or changing, and to think of it as successive or changing, we must think of its moments as being different to each other. This requires more than distinctness imposed in virtue of a prior metaphysical commitment; in order for the moments of the world to differ there must be a difference in what exists in the world, for our understanding of a moment just is an idea of a grouping of existing things.

As discussed above, this is what I take the something more that the first argument seems to hint at to be. It is important that the parts discussed are distinct but, more fundamentally, they must bear properties. When a part is thought of as a particular with determinate properties, it has a certain reality that merely distinct parts do not necessarily have. If we consider our ideas we find that parts of this sort do indeed form aggregates by addition. And an infinity of these parts would seem to result in something infinitely large. Again though, what does the work is the idea of a part as propertied. In the case of moments we find this point is even more pronounced in that the distinctness of moments is a function of their differing intrinsic properties: time requires succession, so moments must exhibit difference. Since we have no reason to think that moments are anything over and above slices of existing things (and I will treat these existing things as determining what we might think of as the intrinsic properties of moments), succession requires that we think of the world as exhibiting change in what exists with each momentary slice differing to what came before and what comes after. With this in mind I suggest we can now make sense of the third argument against infinite divisibility.

2.4.3. Reconsidering the Third Argument: Contradictory Moments

Hume's third argument maintained that it was an "arrant contradiction" for the parts of time to coexist. I argued that a commitment to actual parts does not explain this. However, if we think of moments in the way I have suggested that Hume's rejection of abstraction and discussion of the concept of time encourages us to, we can make better sense of this. Given that each moment is, on this view, a sum of determinate existing things and succession requires difference between moments, to have two moments coexisting will require the coexistence of contrary states of affairs: this is what generates the contradiction. To say that two moments coexist is to suggest two contradictory states of affairs occur at the same time. Contiguous moments may strongly resemble each other in myriad ways but, in order to speak of two moments at all, there must be some difference between them. If there is no difference then what we have does not exhibit succession and so our concept of time is simply inapplicable. However, if there are differences in what exists, then no two moments can coexist merely in virtue of what moments fundamentally are.

From this we can see more clearly that the distinctness of moments is parasitic on their intrinsic properties (which, as above, one might think of simply as the things that exist at that time). If you have two contiguous moments which do not differ in any way, there are no grounds from within Hume's conception of time to say you have two moments not one. Only difference between moments can give you the succession required and that is also exactly the feature which will entail two moments cannot coherently coexist. Distinction, then, supervenes on the intrinsic features of moments and, if moments did not possess these intrinsic properties, we could not speak of them as moments, let alone as distinct moments. This is the sense in which I take a sole concentration on actual parts to be a distraction. If we shift the concentration to the intrinsic features of moments instead we not only get an interpretation which explains the contradiction appealed to in the third argument, we also get the only means available to afford moments their distinctness. And all without presupposing assumptions or implicit

commitments on Hume's part for we do not need to do so – his explicit commitment to a certain concept of time and his rejection of abstraction by separation suffice on their own.

All of this is rooted firmly in Hume's epistemology and our understanding of moments and of time. However, his methodology has clear implications in this case: To do metaphysics at all Hume told us we must ensure our thinking is grounded in clear ideas. His investigation into the concept of time resulted in his tightly binding the concept of time to that of succession. So tightly that he concludes that the idea of time without change is incoherent. This does not tell us that the world exhibits succession and so is temporal. However, it does tell us that, if it does not exhibit succession, there is no sense in our calling it temporal.

Relatedly, an idea of a moment only has content when it is thought of as a particular determinate set of existing things. There may be coexisting "moments" in the world if you construe moments in a different way: but if we want to know whether the moments of the world, as we understand moments, can coexist, Hume will tell us that they cannot. Equally this reasoning offers to explain why two different years or two different days could not coexist: a day and a year equally express some way the world is in those times, the way the world is through the course of one year will likely differ from the way the world is through the course of another, if this is the case they cannot coexist. These ideas are of course only ideas. However, ideas are also the fundamental tools we have by which to investigate the nature of the world and, when adequate, "the relations, contradictions and agreements of the ideas are all applicable to the objects."[70] It is possible that the world does not conform to these ideas in which case I think we would have to conclude that it simply was not temporal. However, if it is temporal, Hume will tell us certain things must be true of it and this includes that its moments cannot coexist.

[70] T 1.2.2.1; SBN 29.

In this I hope to have suggested several things: firstly, that Hume's arguments against infinite divisibility are better understood in the context of the concepts of time and space, and moments and parts that emerge in T 1.2.3. than in the context of a commitment to actual parts. Secondly, that the distinctness of moments which a commitment to actual parts requires is only coherent in the context of the intrinsic properties of moments anyway. As such, we cannot avoid discussing this element of them even if we only wanted to focus on distinctness. From this it seems that, even if actual parts theorising was sufficient to explain his arguments (and I have argued it is not), we could only get core elements of an actual parts reading off the ground by appeal to the sorts of features of moments I have outlined above. For these reasons it seems better to allow the nature of parts and moments and their intrinsic properties to come to the fore in thinking about Hume's arguments here. Doing so simply has greater explanatory power.

An interesting consequence of this is that, just as Hume tells us, the parts of his system are "intimately connected."[71] If this is right it is not only because they rely on each other: his rejection of abstraction by separation does the real work in both. However, they are connected in that considering each part of the system in the light of the other provides illumination. This is perhaps hardly surprising given the epistemically-driven metaphysical methodology I have presented Hume as forwarding in T 1.2.1.

Finally, if we think it is these commitments regarding ideas and the resulting concepts of time and space, and moments and parts that best explain his reasoning in the arguments of T 1.2.2., we can also argue that his arguments do not depend merely on a latent commitment to an assumed orthodoxy of his era. Instead, his reasoning can be explained well by appeal to other principles and commitments that he does defend. Motivating his arguments in this way allows us to explain how it is deep commitments from within his conception of time that do a lot of the work here, not just assumptions he unthinkingly adopted from his contemporaries. Instead, he is using his own

[71] T 1.2.4.2; SBN 39.

well-developed notions of the concept of time to explain and support a defensible position.

2.5. Does Hume Beg the Question?

I want to finish by returning to the second objection considered above: that Hume begs the question against the potential parts theorist. Firstly, it is perhaps already clear that I do not think he begs the question in the sense that Holden discussed above. To the extent that I have argued he is not motivated by a commitment to actual parts, I also do not think that he assumes actual parts and so begs the question against the potential parts theorist in that sense. However, does he do it in any other sense? In particular, does he assume a parts-first approach in his manner of proceeding in the first argument: "I first take the least idea I can form…whatever I discover by its means must be a real quality of extension."[72] Here it seems we are asked to think about the nature of the whole by thinking about the nature of a part. This might seem to involve something the potential parts theorist would reject as presumptuous. Here I will give some reasons for thinking he does not presume too much. However, he is motivated by principles that are deeply Humean, and which his opponent may not accept.

I have argued that what primarily motivates Hume in his discussion is the concept of time as requiring change or difference in what exists. What is required in order that our idea of time be applicable is that there be difference between what exists in time. This difference grounds the division of the whole into moments. However, this does not depend on distinct moments so much as a propertied whole. Once we accept a propertied whole that exhibits difference in what exists, Hume's understanding of complexity enters the picture. Hume introduces the simple/complex distinction as follows: "Simple perceptions or impressions and ideas are such as admit of no distinction nor separation. The complex are the contrary to

[72] T 1.2.2.2; SBN 29.

these, and may be distinguished into parts."[73] Importantly then, his characterisation of what it is to be complex does not require that a complex thing already consist of parts. Instead, to be complex as opposed to simple is just to "admit of distinction into parts."

To be complex is to be distinguishable into parts. It appears then, that something can be complex *even before* its parts have been distinguished. To the extent that it admits of possible distinction it is complex. When, then, is something distinguishable into parts? Hume's answer to this has come to be known as his "Separability Principle." This principle crops up in a number of places and seems to motivate his thinking here and elsewhere. It is certainly present in the discussion of time and space and is integral in his characterisation of the idea of time as nothing over and above an idea of an ordering of existing things. The fullest expression of the principle is given in his discussion of abstract ideas which immediately precedes his discussion of time and space:

> [W]hatever objects are different are distinguishable, and that whatever objects are distinguishable are separable by the thought and imagination. And we may here add, that these propositions are equally true in the inverse, and that whatever objects are separable are also distinguishable, and that whatever objects are distinguishable are also different. For how is it possible we can separate what is not distinguishable, or distinguish what is not different?[74]

Difference, for Hume, entails distinguishability and separability in thought. And to be complex for Hume is simply a matter of being such that you can be distinguished into parts. It seems that durations of time are complex in virtue of exhibiting difference, not in virtue of consisting of distinct parts. The way he defines complexity does not presuppose distinct parts and even a potential parts theorist could accept that a whole can be distinguish*able* into parts prior to any act of division. They would only contest that it actually consists of these distinct parts before such division has occurred.

[73] T 1.1.1.2; SBN 2.
[74] T 1.2.7.3; SBN 18.

In a way there is no interesting difference between the potential parts view and the actual parts view given Hume's commitments. It does not matter whether the parts exist in the whole from the start or whether the whole possesses parts only potentially. What matters are the properties of the whole and these alone are sufficient to ensure a complex whole prior to division. The sense in which a duration is complex for Hume is not one the potential parts theorist would necessarily reject. They might even be happy to allow that the whole is complex in Hume's sense, since they can happily accept that a unified whole is nevertheless at least potentially divisible into parts. The sense in which Hume's moments are in a duration from the start then is only the sense in which the duration has properties which can be characterised in terms of distinct moments.

I contend that, whether we think in terms of a propertied whole, or in terms of propertied parts, what matters and what is doing all the work, are the properties exhibited. These ground the complexity of the whole as well as any possible distinction of parts within that whole. I do not want to suggest that there is no sense in which Hume also thinks the parts are prior to the whole, after all, his second argument (to be explored in the next chapter) is effectively aimed at establishing this. What I do think we should note though is that a commitment to the ontological priority of the parts is the result of argument, not an underlying assumption. We can explain the way that Hume argues in the first and the third arguments without appealing to any such underlying assumption and, indeed, by appealing only to a way of characterising the situation that is not obviously at odds with a potential parts reading. It is perfectly possible for the properties of the whole to do the work required without presupposing distinct elements within it prior to division.

If this is right then thinking in terms of actual parts is again to miss the real driving force in play. If the world is temporal then it contains differences in what exists. We do not need to say that it actually consists of parts, distinctly present in the whole from the start. If it contains difference then it already is such as to admit of distinction and separation in the minds of creatures like

us. It contains all that is required without presupposing actual parts. We will see in the next chapter that Hume also thinks that anything complex exists in virtue of the existence of parts and so he also accepts a much deeper form of priority of the parts. However, accepting this deeper commitment is not required in order to motivate the arguments under consideration. As such, I think it entirely possible that Hume can avoid the charge of simply begging the question.

On this interpretation, it seems to me that Hume does not beg the question against the potential parts theorist. Instead his approach somewhat undermines the distinction between actual and the potential parts. The work is done by his understanding of what it means to be complex and by the Separability Principle. This principle receives fairly little defence, and what it does is mostly empirical confirmation from introspection, for example, he states "there are not any two impressions which are perfectly inseparable…Where-ever the imagination perceives a difference among ideas, it can easily produce a separation."[75] What justifies this principles is perhaps, for the most part, the way that Hume views the world and the essential lack of necessary connexions in it. At the heart of it all then is a very Humean world-view that his opponents might oppose for other reasons. However, the underlying motivation comes not from an assumption of ontologically prior parts: instead the claims are defended and explicable in virtue of other core commitments he holds.

Hume's opponents may still contest his concept of time as requiring change, or indeed, his separability principle, neither are beyond contention. However, I hope nonetheless to have shown a few important things: firstly, that we have every reason to think Hume is engaged in a kind of metaphysics (albeit a conditional one) and one that is concerned with propertied things. As such, I do not think he is best characterised as arguing against the broadest sense of infinite divisibility, instead I see his arguments as aimed quite specifically at time and space, and aiming to characterise what a spatial or temporal world could be like. Metaphysics perhaps then, but a

[75] T 1.1.3.4; SBN 10.

very cautious type. Both the methodology and the conclusions are deeply informed by epistemic considerations and find core motivation from them. His particularism about ideas, the Separability Principle, the simple/complex distinction: all these elements inform his account and illuminate the patterns of his reasoning. Alongside this we can see that the ideas of time and space, and of parts and moments, which are not elaborated upon until the second part of his system, are nonetheless in play in the first part. That both parts of the system are grounded and motivated by elements set out in Book 1, Part 1 of the *Treatise* seems to be one instance of the "intimate connection" between them.

3. The Structure of Time: Hume's Positive Proposal

3.1. Introduction

Through his arguments against the infinite divisibility of finite extensions and durations, Hume forwards his positive proposal as to the spatial and temporal structure of the world, should it be such as to have spatial or temporal structure. He argues that space and time are not infinitely divisible; as such they must have ultimate parts. In the case of time these are moments. These moments are ontologically fundamental, playing this role in virtue of being simple and indivisible. For Hume, their simplicity entails that, though they compose durations, they themselves possess no duration.

As per the line of argument I forwarded in the previous chapter, I will take this to be making claims about the world (not just our experience) and the structure it must have if it has temporal structure at all. When evaluating Hume's positive proposal there are two problems that have dominated the discussion which I will refer to here as the composition problem and the union problem. The composition problem concerns how it is that unextended parts could compose something with extension, or, as I will be focusing on time, how it is that durationless moments can compose something with duration. The union problem concerns how it is that the ultimate parts of the world, be they spatial or temporal, can be positioned contiguously so as to form extensions and durations. The first problem is one of how to get something with duration from moments which have none. The second concerns the difficulty in characterising how simples can be arranged: spatial points, for example, are simple and so lack inner and outer parts so they would seem to have no surfaces. Given this, they would seem unable to touch in the way required in order that they form a union. Equally, as moments have no earlier and later parts it is not clear how to talk about the sequences they need to be able to form in order to constitute durations. If any given moment has no earlier or later parts, how can we talk about its position in between the moments that surround it?

Part of what makes these problems interesting is that Hume explicitly addresses them in T 1.2.4. "Objections Answer'd." They are the first two objections he considers and he dismisses them swiftly and with relatively little discussion (the first receives only one paragraph of comment, the second only three). What discussion does occur is centred on space and the temporal analogue is not addressed though we might think that Hume intends an analogous solution to hold. On the whole, these brief remarks have left commentators unsatisfied. Not only is it not clear how his proposed solution addresses the problems, it is not even entirely clear how his proposal differs to alternatives that he rejects as inadequate. Part of my aim in addressing these problems then is interpretive: why did Hume think his responses adequately addressed these problems? If, as some have suggested, his account is so obviously flawed, why did he take himself to have dealt with these concerns? This puzzle alone might be enough to encourage us to reconsider what is going on and seek a more charitable interpretation. After all, the interpretation we hold him to might not be watertight, but it should not be obviously flawed.

In exploring these issues I will first draw out Hume's theory of moments, with particular focus on the properties that supposedly make the spatial and temporal parts of the world problematic. Next I will present the two objections above in more depth looking at how they are levelled at the account he offers. I will argue there has been one very promising line of response to them (at least to them as they apply to phenomenal time and space) and suggest that this constitutes a route by which Hume might avoid these problems at least as they concern phenomenology. However, since my concern is metaphysics, this resolution is not available without work to me.

Instead, to resolve these issues we have to show that the metaphysical case can be addressed in an analogous way. To suggest a way this might be done I appeal once again to Hume's methodology and the notion of ideas as adequate representations as explored in the previous chapter. By these means I aim to provide a way by which we can successfully extend this solution beyond phenomenology to metaphysics. By doing this, we find that

Hume's moments are capable of playing the role he requires of them. I conclude that Hume's theory need not be viewed as confused: instead, it can be seen to offer and interesting and defensible solution to these troublesome problems.

3.2. The Properties of Moments

To begin then, we need to consider some further details of Hume's theory regarding the nature of moments. There are two features in particular that are important here. The first is that moments are simple. In the previous chapter I considered two of Hume's arguments against the infinite divisibility of space and time. In these, he aimed to demonstrate difficulties that emerge if we suppose infinite divisibility: that it would entail coexisting moments of time, and impossibly large finite extensions and durations. Hume's solution to the difficulties he sees infinite divisibility as entailing is to posit an ontological base layer of indivisibles: these indivisibles are what end the process of division. The key feature of Hume's moments, then, is that they are simple and indivisible. We can see from the discussion of the Separability Principle at the end of the previous chapter that these two concepts will be tightly bound together for Hume. Once again, the Separability Principle holds that:

> [W]hatever objects are different are distinguishable, and that whatever objects are distinguishable are separable by the thought and imagination. And we may here add, that these propositions are equally true in the inverse, and that whatever objects are separable are also distinguishable, and that whatever objects are distinguishable are also different. For how is it possible we can separate what is not distinguishable, or distinguish what is not different?[76]

Something is divisible in virtue of having elements within it which are different in the relevant way, for this is what makes distinguishing and separating possible. As before, this notion is connected to and contained within Hume's simple/complex distinction: "Simple perceptions or impressions and ideas are such as admit of no distinction nor separation. The complex are the contrary to these, and may be distinguished into

[76] T 1.2.7.3; SBN 18.

parts."[77] Something is complex in virtue of admitting of distinction into parts, and something admits of this in virtue of having elements which are different. In the case of time this tells us the way in which durations are complex: any given duration is complex because it is successive, that is, it has earlier and later parts which are distinguished by being different to each other.

So, to the extent that anything is successive, it can be conceptually divided into earlier and later moments. The nature of moments and their simplicity can now be seen: A moment is simple in that it is uniform, that is, unchanging and so not successive. Being unchanging, moments contain none of the difference that could enable further distinction into parts and so they themselves possess no earlier and later parts. They are not successive and so, for Hume, have no duration.[78] A temporal world, should there be one external to our experience, emerges as a discrete series of these temporally simple moments.

Not only does Hume think that any duration must resolve itself into indivisible ultimate moments, he is also committed to a further claim regarding the fundamentality of these moments compared to the complexes they compose in arrangement. This commitment is brought out in his second argument against the infinite divisibility of matter, a "strong and beautiful" argument which he attributes to Malezieu.[79] Interestingly enough, in Malezieu's formulation we are offered demonstrations on both sides, that is, both against the possibility of infinite divisibility and against ultimate parts. Malezieu's conclusion is that we should be modest in our aims for understanding. Hume focuses on only the second part of Malezieu's

[77] T 1.1.1.2; SBN 2.

[78] Moments then are temporally simple. However, although they possess no duration, nothing in my characterisation of them would prevent them from being spatially complex. I suggested in the previous chapter that Hume's attitude towards abstraction encourages us to think of time as an ordering of existents and moments as sums of these existents. If we think of moments in this way it seems that each moment may very well include spatial complexity. On the flip side: a spatial simple is simple insofar as it is not extended, however, nothing seems to prohibit it from existing through different moments of time and so possessing duration.

[79] Nicolas de Malezieu (1650-1727). A pupil of Rohault and teacher to the Duke of Burgundy. For discussion of Malezieu and Hume's use of the argument see Frasca-Spada (1990) pp. 382-391 and Ryan (2012).

discussion, quite possibly because that was the only part he encountered.[80] He expresses his formulation of the argument (set out as it is in terms of extension not duration) as follows:

> i. ['Tis evident that] existence in itself belongs only to unity, and is never applicable to number, but on account of the unites, of which the number is compos'd. (T 1.2.2.3; SBN 30)
>
> ii. 'Tis therefore utterly absurd to suppose any number to exist, and yet deny the existence of unites. (T 1.2.2.3; SBN 30)
>
> iii. [If extension is infinitely divisible then any extension is always a number not a unit, it] never resolves itself into any unite or indivisible quantity. (T 1.2.2.3; SBN 30)
>
> iv. [If extension is infinitely divisible] it follows, that extension can never at all exist. (T 1.2.2.3; SBN 30)

Here we have another proposed *reductio* of infinite divisibility. Anything which is complex is many things not one thing, and can only exist if the individual things that constitute it exist. Something which is infinitely divisible will, Hume contends, always be many things not one thing and so at no level can we find the individual things required to explain the number. If the world contains temporal complexity at all then, and so is such as to instantiate time, the implication is that a proponent of infinite divisibility cannot account for this.

Leaving aside for now the strength of the argument, we can see it shows key features of Hume's position regarding composition and the nature of moments: complexes exist in virtue of the existence of the simple things that compose them. Without simple things there could be no complex things and it is exactly that they are simple (and so not a number of things) that allows moments to play this ontologically fundamental role of grounding complex things. Simples, unlike anything complex, can exist alone. Whereas anything complex requires the existence of the things that make it complex: "the unity, which can exist alone, and whose existence is necessary to that of all number, is of another kind, and must be perfectly indivisible, and incapable

[80] Ryan (2012) makes a case for this.

of being resolved into any lesser unity."[81] From this Hume concludes that, if reality is complex at all, its most fundamental level must be simple. For were it not, there could never be complexity.

In extracting Hume's commitments from this argument, once again, contention rules. Here the key lines of disagreement cut along whether we interpret him as asserting merely an asymmetric dependence relation: that is, that extensions and durations, being complexes or aggregates of things (or as Hume puts it here: "numbers"), *depend* on the units that compose them such that, were there no units, there could be no complexes. Or whether we interpret him as maintaining that, in truth, there are no complex things, only aggregates of simples.

On the first avenue we can talk of complex things as existing but their existence is dependent on more foundational units. We can find an interpretation of this sort in McRae when he states that "[a]ll pluralities derive their reality from the units of which they are composed."[82] One might think this is all Hume needs in order for this argument to go through. This characterisation also seems to gel with the way Hume sets out his argument. He tells us, for example, that existence is "never applicable to number, *but on account* of the unites, of which the number is compos'd," and "[t]wenty men may be said to exist; but 'tis only because one, two, three, four, &c. are existent." The emphasis in the first quotation is mine but the tone seems to be conditional: if there is a complex, then there must be simples. It is not perhaps that we must deny that complexes exist, it just is not an option to take complexes to exist and to deny the existence of simples. If we take him to be asserting the conditional claim that the existence of a complex implies the existence of simples, then he is far from denying the existence of complexes.

However, some have been inclined to press for something stronger and argue that Hume is committed not just to the dependence of composites on their units but to the non-existence of composites. Baxter takes a strong line

[81] T 1.2.2.3; SBN 31.
[82] McRae (1980) p. 121.

of elimination on this, taking Hume to be committed to what he calls the Existence Assumption that "*only single things really exist.*"[83] As evidence he cites Hume's statement that "'Tis evident, that existence belongs only to unity, and is never applicable to number [but on account of the unites, of which the number is compos'd]." (T 1.2.2.3; SBN 30). Here Baxter cites only the first part of the quotation: however, I have kept the rest in brackets for it seems relevant. Baxter goes on to expand on this:

> Something that is many things does not literally exist (singular). It is not an it; it is a they. "It exists" said of it is literally false. "They exist" is what is literally true. So, for example, to say "A crowd exists" (or perhaps more idiomatically "There is a crowd") is not literally true. We take it to be true because we take it to convey something that is literally true, namely, "Many people each exist and are close together" (or more idiomatically, "There are many people close together").[84]

If we look at Hume's language he does indeed discuss the fictitious nature of certain "units," these are better thought of as collections in the mind rather than unities in the world:

> 'Tis in vain to reply, that any determinate quantity of extension is an unite; but such-a-one as admits of an infinite number of fractions, and is inexhaustible in its sub-divisions. For by the same rule these twenty men may be consider'd as an unite. The whole globe of the earth, nay the whole universe may be consider'd as an unite. That term of unity is merely a fictitious denomination, which the mind may apply to any quantity of objects it collects together; nor can such an unity any more exist alone than number can, as being in reality a true number.[85]

We can talk of any collection as a unit: however, it seems we need to recognise that this is merely a way of talking. We can talk as though many things are one and it will often be convenient to do so: however, the metaphysical principles that ground the existence of things are such that this will be merely a way of talking. We might talk as though a collection is a unit, but this is merely a useful way of speaking. Perhaps in truth no complex is a unit; instead it is always many things. Even given this though,

[83] Baxter (2008) p.26.
[84] Baxter (2008) p.26.
[85] T 1.2.2.3; SBN 30.

this does not seem to support the very strong form of reductionism Baxter suggests. Certainly Hume's attitude towards abstraction would seem to encourage us not to posit complexes as anything over and above arrangements of simples. However, thought of just as arrangements of simples, I do not see good reason to exclude them. Complexes are not thereby nothing, even if they are dependent. Equally, they are not nothing even if they are, in fact, many things. What Hume primarily seems to object to in the above is not the existence of complex things, but the idea that a complex thing is a true unit. True units, as discussed, can exist alone. True units are ontologically foundational.

I am inclined to err more on the side of complexes as having their existence dependently, rather than as being excluded from existence entirely. For my purposes here though, nothing hangs on this. To summarise, for Hume the world is not infinitely divisible temporally or spatially. Every duration exists in virtue of the existence of its ultimate parts, that is, simple moments. These moments are simple in that they are not successive and so lack duration themselves. They are ontologically fundamental in that they are required to ground the existence of everything else.

3.3. The Challenges: Composition and Union

Now that the key features of Hume's moments are clear, two problems immediately present themselves. Here I will present the problems alongside Hume's responses to them. Both seemingly arise whether one interprets Hume as discussing phenomenology or the external world and what becomes apparent is that it is unclear exactly how Hume's approach fares better than alternatives he rejects. Firstly, the composition problem.

3.3.1. The Composition Problem

The composition problem centres on the simple question of how it could be possible to get something that has extension from parts that have no extension or, in the case of duration, how durationless moments can

compose something that has duration. Concerns that Hume's solution fails to avoid this problem arise in a number of places, but Johnson sums them up nicely:

> [Hume] cannot generate extensions out of the multiplication of extensionless points. Thus on his theory there can be no space. A similar conclusion can be reached about time. Time is composed of ultimate parts that, being indivisible, have no duration. From such durationless moments it is impossible to generate duration. Once again, no multiplication of nonentities can create an entity. So, on Hume's view, time cannot exist.[86]

Johnson takes this problem to be devastating for the very reality of time for Hume. To the extent that extensions and durations exist, he suggests that Hume cannot account for them. The implication for him is that, given the nature of moments, Hume's time could only ever collapse down into a durationless instant.

As I mentioned above, the composition problem is not new. Concerns relating to it seem to motivate Hume in his rejection of mathematical points and his approach seems to be intended to avoid it. It is the first objection he considers in his "Objections answer'd" at T 1.2.4. He sets it up in one paragraph and dismisses it in the next. However, in spite of this swift dismissal, it remains opaque as to exactly how Hume's solution is intended to address the problem.

Given that Hume addresses this concern we should naturally look at his response. His comments are limited to the case of extension but he clearly takes himself to have offered a solution. In this he broadly follows Bayle's way of setting out the difficulty as a trilemma, where each horn is unacceptable. Extension it is suggested is either i. infinitely divisible, or ii. has ultimate parts. By this point (T 1.2.4.) Hume has argued at length against infinite divisibility and so is left with the option of ultimate parts. If there are ultimate parts then either these ultimate parts are iia. extended or iib. simple. Hume argues the parts cannot be extended on the grounds that, if they were, they would be divisible and so fail to be the simple foundational units that

[86] Johnson (1995) p.96.

are required to ground complex things. On these grounds he dismisses physical points as "too absurd to need a refutation."[87] Ultimate parts must be simple and yet Hume also rejects simple mathematical points. Mathematical points, though unextended and so simple, cannot generate extensions; they are "non-entities" and seemingly it is sensitivity to the challenge of the composition problem which results in Hume rejecting them as absurd as well. He then suggests a "medium" between the extremes as a route out:

> It has often been maintain'd in the schools, that extension must be divisible, in infinitum, because the system of mathematical points is absurd; and that system is absurd, because a mathematical point is a non-entity, and consequently can never by its conjunction with others form a real existence. This wou'd be perfectly decisive, were there no medium betwixt the infinite divisibility of matter, and the non-entity of mathematical points. But there is evidently a medium, viz. the bestowing a colour or solidity on these points; and the absurdity of both the extremes is a demonstration of the truth and reality of this medium. The system of physical points, which is another medium, is too absurd to need a refutation. A real extension, such as a physical point is suppos'd to be, can never exist without parts, different from each other; and wherever objects are different, they are distinguishable and separable by the imagination.[88]

Between the two extremes, then, lies an acceptable alternative: points which possess certain qualities. In the case of space he talks of "the bestowing a colour or solidity on these points." Though not extended, since they possess these qualities, they are also not to be "non-entities." By these means he apparently intends them to be capable of composing extension where simple mathematical points could not.

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[87] To add to fun of interpreting Hume's moves here, it can be noted that, in the *Enquiry,* Hume expresses an apparent commitment to physical points again, stating "[w]hatever disputes there may be about mathematical points, we must allow that there are physical points," (EHU 12.18N1; SBN 156). Some have taken this to mark a change of heart from his rejection of them in the *Treatise* (Kemp-Smith, for example, appears to read this in this way, see his 1941, pp. 268-9). However, importantly, Hume goes on to say of these points that they are "parts of extension, which cannot be divided or lessened, either by the eye or imagination. These images, then, which are present to the fancy or senses, are absolutely indivisible." (Ibid.) His language of indivisibility here, as well as the use of visual imagery again, make it hard to read this as a shift in view. Being indivisible these points are clearly not the physical points he rejects in the Treatise. Instead, in spite of his language, they come out sounding rather a lot like the points he espoused there. For more discussion and defence of this see Frasca-Spada (1998) pp. 30-32.

[88] T 1.2.4.3; SBN 40. For the discussion in Bayle see his (1965), footnote G to the article 'Zeno of Elea,' pp.359-360.

Firstly, it is clear that Hume's example here appeals to phenomenal qualities: one might immediately worry then that this solution can be of no real bearing on the issue as I am interested in it. I am concerned to address these issues as they relate to the ultimate parts of time and space should there be any but, as discussed in the previous chapter, Hume thinks we do not have to go far smaller or shorter than normal experience to go beyond what our senses can perceive. I take the arguments of T 1.2.1. to show that Hume is committed to ultimate parts which may be entirely imperceptible to us so what sense can we make of thinking of them as coloured or as tangible? This is an interesting question and one I will address in section 3.5.1. where I suggest that we can make perfect sense of Hume's comments here if we view them as working as a kind of analogy or example model. For now though, I will set this issue aside in order to examine the ways that Hume's proposed solution has hitherto been evaluated in the literature.

So, Hume both recognises the composition problem and forwards an alternative apparently intended to address it. However, Johnson is not the only commentator to worry about the viability of this alternative. Doubts about this part of Hume's theory are extremely common and are partly this part of the *Treatise* seems to be viewed as especially weak.[89] The sense of lingering dissatisfaction is expressed nicely by Allison:

> [I]t is unclear how the attribution of color or tangibility to these points makes the difference on which Hume insists and provides the basis for an answer to the classical objection against mathematical points. For whatever non-extensive qualities these points may possess, as far as extension is concerned, it still seems like an attempt to make something out of nothing.[90]

That the points are coloured or tangible does not seem to be enough. Nor is this is a new concern: Bayle himself comments that "several nonentities of extension joined together will never make up an extension."[91] The problem is that they need to be extended, or Hume needs to tell us how these points

[89] For a couple of more recent examples see Allison (2008) pp. 40-44 and Baxter (1988) pp. 134-5.
[90] Allison (2008) p. 41.
[91] Bayle (1965) pp. 359-60.

can form an extension. One might think that to do that he needs to talk about the relational properties of the parts, not their intrinsic qualities. It is surely not the colour or tangibility of these points that allows them to form extensions but their extrinsic properties of being related to each other in such a way that collectively they take up space or time. By focusing on their intrinsic qualities perhaps Hume is fighting a losing battle; the intrinsic properties of the points may explain how it is that the extension is a *coloured* array, but they cannot explain how it is an *array*.

3.3.2. The Union Problem

The union problem concerns how it is that the parts that Hume proposes, given their specific natures, can be arranged in the way required. Specifically, how they are capable of forming the kinds of unions that extensions or durations seem to be. To have an extension, say, it is not enough to have coloured or tangible points, these points need to be ordered in a spatial arrangement. Seemingly, they need to stand in relation to each other such that their contiguity enables them to form an extension and yet, to do this, one might think that they need to touch. Unfortunately, it is far from clear how simple points could touch with destroying one another. Being simple they presumably possess no left nor right sides, no upper or lower bounds, essentially, no surfaces. Again, Hume discusses this problem, this time in the context of mathematical points. However, being just as simple, one might think his coloured points are just as problematic. In the case of time it seems equally clear that the component moments need to form an ordered series. Any given moment is preceded by one before and followed by another, and yet this seems to introduce a kind of complexity into the moment in virtue of having something like a beginning and an end. If this makes more complex moments then it would seem very problematic, for moments cannot be complex in this way. Hume's concept of time and space as "manners of appearance" or "orders of disposition" make this element of arrangement key. However, one might worry that this question of how these simples can be in any sense contiguous in time or space does not have an easy answer.

To explain the specific nature of the union problem in more depth it is helpful to look at the options Hume dismisses in his own discussion. As with the composition problem, Hume was aware of and sensitive to the union problem. Again, he dismisses mathematical points on this basis:

> A simple and indivisible atom, that touches another, must necessarily penetrate it; for 'tis impossible it can touch it by its external parts, from the very supposition of its perfect simplicity, which excludes all parts. It must therefore touch it intimately, and in its whole essence, secundum se, tota, & totaliter; which is the very definition of penetration.[92]

Here Hume is talking about mathematical points, but one might have worried he was talking about his own spatial and temporal simples. Parts and moments are simple and indivisible, so why do they not suffer the same problem? For he certainly seems to take them to form unions: "[f]rom the union of these points there results an object, which is compounded and divisible, and may be distinguish'd into two parts, of which each preserves its existence distinct and separate, notwithstanding its contiguity to the other."[93]

If Hume's points are simple, and he stresses that they are, then they share the exact property of mathematical points that makes these points so problematic. Hume's simples also have no parts, so no surfaces, and no left and right sides. If mathematical points would annihilate each other upon contact, resulting in a collapsing down into a single point regardless of how many are added, surely Hume's simple elements would do the same? Again, it is not clear how Hume's simples are meant to fare better than the rejected mathematical points.

This problem of forming unions is taken to apply equally to the case of the moments of time, though neither Hume nor those who comment on this problem tend to spell out in detail what the parallel case would be. Nevertheless we might imagine it to work something like this: any duration

[92] T 1.2.4.4; SBN 40-41.
[93] T 1.2.4.6; SBN 41.

is an ordered series of successive moments. Moments are simple, meaning they do not have earlier parts and later parts. Since they do not have earlier and later parts, how can we make sense of their being connected in a series? Take the series of moments *a*, *b*, *c*: moment *a* terminates with the commencement of *b*, while moment *c* commences with the termination of *b*. But that would seem to imply that we can distinguish an earlier and a later part of *b* for how else could we make sense of its position in the series and the relations it bears to the other moments? By its nature it cannot have these earlier and later parts, and yet, without them, explaining its place in the series is a challenge. If we must think of Hume's moments as connected in a series, and the moments Hume describes cannot be so connected, then it looks like Hume's theory is inadequate. Just as in the case of the composition problem, it is alleged that Hume has failed to provide a viable alternative to the alternatives he argues that we should reject.

Once again, this is a problem that Hume explicitly recognised and took himself to have dealt with. And, once again, it is seemingly by appeal to their intrinsic qualities that Hume mounts his defence. He reiterates that these spatial simples are endowed with colour and solidity. Because of this he argues they are not annihilated upon contact: "A blue and a red point may surely lie contiguous without penetration."[94] So the quality of possessing colour is forwarded as a means of denying the total penetration, eclipse, and, essentially, annihilation that he takes mathematical points to fall victim to:

> I ask any one, if he sees a necessity, that a colour'd or tangible point shou'd be annihilated upon the approach of another colour'd or tangible point? On the contrary, does he not evidently perceive, that from the union of these points there results an object, which is compounded and divisible, and may be distinguish'd into two parts, of which each preserves its existence distinct and separate, notwithstanding its contiguity to the other.[95]

Once again, commentators remain unimpressed with this attempt at resolution. Taking it that no things that lack surfaces could touch, C. D. Broad considers the possibility that Hume's points are in fact separated by

[94] T 1.2.4.6; SBN 41.
[95] Ibid.

an intrinsically minimal distance such that the points could not be nearer than this. Broad seemed to think this view was rather a push, though more recently Allison has been friendlier to it.[96] Leaving aside whether we can even make sense of what a gap between moments could be, one cannot help but feel that, if this is what Hume had meant, he really could have said. In summary, both the composition and the union problems are considered and apparently addressed by Hume but it seems the way he addresses them is, at best, opaque and, at worst, inadequate. He recognised the problems but it is not clear why the positive solution he proposes fares any better against them than the alternatives he condemns.

3.4. Falkenstein's Account of Phenomenal Space

Both of the problems above might be seen to press a similar thread of concern: that Hume's solutions appear to appeal to intrinsic qualities (e.g., colour, tangibility) but that what needs to be explained is not intrinsic qualities but extrinsic, relational qualities. Hume tells us that our ideas of time and space are ideas of the orders of arrangement or disposition, or manner of appearance of other things. It is their arrangement that needs to be explained and explaining this involves not just telling us about the intrinsic features of what is arranged but about how they are arranged. To the extent that his proposed solutions focus only on the intrinsic features we might think they are failing to explain what even Hume recognises as a core element of these structures.

One approach that is sensitive to this concern is offered by Falkenstein.[97] Although his focus is on phenomenal time and space, that is, the spatial and temporal structure of experience (rather than the world should it exist beyond our experiences), his response to the problems above (as directed at phenomenal time and space) is illuminating. By appealing to the discreteness of the experiential manifold, Falkenstein argues that we can make sense of,

[96] See C. D. Broad (1961) p. 169 and Allison (2008) p.42-3 for more on this.
[97] Falkenstein (2006). For discussion on this see also Allison (2008, chapter 2, esp. p.41). A broadly similar (though less fully developed) response along the same lines as Falkenstein is discussed in Jacquette (1996) pp.72-3.

and defend, Hume's positive proposal. Due to the differences in our starting points it is clear that the success or otherwise of this will not carry over straightforwardly to the problem as it applies given the way I have set things out. However, I will argue Hume gives us the resources to extend such an account in this way and for that reason a successful resolution in the case of phenomenology certainly bears upon the problems at hand here. Firstly though, I will set out Falkenstein's approach.

Falkenstein's focus is on phenomenal space and the spatial structure of experience. For ease of explanation, he limits his discussion to visual space and so his concern is with the visual array which Hume tells us is essentially a flat painted screen or coloured array: "'Tis commonly allow'd by philosophers, that all bodies, which discover themselves to the eye, appear as if painted on a plain surface."[98]

Hume tells us in T 1.2.1. that our senses are not capable of infinite discernment; instead there is a minimum beyond which we cannot perceive. This tells us that the visual field is not infinitely divisible. Since the visual field is not infinitely divisible we can conclude it has ultimate parts and these parts, that is, these smallest visual perceptions, are ultimate in that they are simple. We can discern no parts within them and they cannot be divided without annihilation. From this, Falkenstein argues that the visual field itself must be discrete, composed of innumerable (but, as per the Separability Principle) distinct points of colour. This discreteness is to be the foundation of his defence of Hume.

If we remember that Hume thought of the visual field in this way, Falkenstein argues we can re-evaluate Hume's contention that "[a] blue and a red point may surely lie contiguous without any penetration or annihilation."[99]And indeed, that two or more points so-positioned form an extension even though none of the component points are extended. Within a discrete manifold, contiguous points can create an extended block of

[98] T 1.2.5.8; SBN 56.
[99] T 1.2.4.6; SBN 41.

colour in spite of their individual simplicity, we need only place them contiguously:

> Because the visual field is not infinitely divisible, one colored point can be set immediately alongside another to produce an unbroken, compound impression that is double the size of a single, pointal impression. Adding a third point produces a compound that is triple the size. And only a finite number of points need to be added to make the compound exceed any given limit.[100]

On this way of thinking, the size of a complex thing is not simply the sum of the size of its parts. Instead, its size is determined by locations taken up by its parts on the set framework that is our visual field: "extension is not the product of the mathematical summation of its parts; it is the product of their manner of disposition."[101] By lying contiguously within this discrete manifold, simple points can form complexes even though they are simple. Within a discrete manifold then, such as Hume's phenomenal space, unextended points can form an extension. So, Falkenstein argues, Hume can avoid the composition problem if we appeal to the way that simples are ordered in experience.

These simples must lie contiguously in order to arrange still. However, Falkenstein also appeals to the discreteness of the manifold as the key to avoiding the union problem of how two simple things could lie contiguous to each other without annihilation. Focusing on the question of how it may be that spatial points can touch even though they have no surfaces, Falkenstein points out that, within a discrete space, there is a further option available in virtue of the discreteness of the manifold:

> But in a discrete manifold the notion of touching is equivocal. Two bodies can touch either by overlapping at a point or by being immediately adjacent without overlapping. Either way there is no intervening point or gap. Consequently, in a discrete manifold, b can touch a by having a as its immediate predecessor, and can touch c by having c as its immediate successor without overlapping with either and without having to be ascribed

[100] Falkenstein (2006) p.61.
[101] Falkenstein (2006) p.63.

> distinct parts, one of which overlaps with a and the other of which overlaps with c.[102]

Falkenstein does not give the temporal analogy but it seems his account could be extended to offer one. One might think that, just as our visual experience can only be so fine-grained, our experiences in time are only so fine-grained. We might think Hume's discussion of the whirling coal is evidence that he thought something like this was the case: "'tis impossible for our perceptions to succeed each other with the same rapidity, that motion may be communicated to external objects."[103] There is a limit to how many frames per second, as it were, we can experience. From this it seems our phenomenal experience of time will also break down into moments (rather than being infinitely divisible), where the smallest experiential moment is the smallest discernible change in the content of our experience. If this is true then, just as two unextended points which lie contiguously can form an extension, two unchanging (and so durationless) moments which occur contiguously in our experience, can form an event with duration.

Being creatures capable only of finite sensory discernment it simply is not the case that between any two phenomenal moments there is a further moment: at a certain level we reach the highest number of moments per interval we can experience and that these moments are contiguous in time in our experience does not prevent them from forming a perceptual event which has duration so long as their contents differ (in that difference is required for the succession that means what we have is a duration not a single simple moment).

On this approach, the discreteness of the phenomenal manifold means that points with the qualities Hume ascribes could avoid the challenges of the composition and union problems, at least as they apply to phenomenal space

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[102] Falkenstein (2006) p.63. Falkenstein's take on Hume's rejection of the proportional/aliquot distinction as frivolous is also rooted in these features of the visual field. He notes that it is not the case that one can continue to generate proportional parts beyond a certain point because the visual field is not infinitely divisible, thus "Mathematicians can invoke the notion of proportional parts if they want, but because that notion is not validly applied to points on the visual field it cannot be invoked to prove that the visual field is infinitely divisible." (2006) p.62.

[103] T 1.2.3.6; SBN 35.

and time. This approach clearly does not yet address these problems as they might apply to the spatial and temporal structure of a world beyond our perceptions. However, if the interpretation I offer in the previous chapter is correct then I suggest we have every reason to think that such an extension to metaphysics is both possible and well-grounded by Hume's methodology.

3.5. From Phenomenal Time to Time Itself

Falkenstein's arguments provide a way of defending Hume's account of phenomenal space and time but, as per the previous chapter, my concern is with the structure of time and space construed in terms of a world beyond our perceptions. In his arguments against the infinite divisibility of space and time I take Hume to be making claims (albeit conditional ones) about the spatio-temporal structure of the world, not only of our experience. To the extent that the composition and union problems can be levelled at the world as much as at phenomenology a defence only of phenomenology cannot be a sufficient defence for me. In what follows, then, I will set out an account of how we might extend such a defence to concern the spatio-temporal structure of the world itself, should it be such as to have one.

Firstly, I will argue that Hume's commitments to adequate ideas' being a tool for investigating the unperceived opens up a natural route by which we can extend the account Falkenstein offers from the phenomenal to the ontological in a way that preserves its success. In particular my line of argument will be to suggest that the moments of time possess the intrinsic features necessary to compose within a discrete manifold. It will also be important, then, that the temporal manifold of the world, should it have one, is discrete. I will argue that the intrinsic properties of moments grant us this. If this is correct, then there is a means by which to argue that both the moments and the manifold possess the qualities required for unproblematic composition and unions. What is more, these two elements are, once again, connected. As the manifold is nothing over and above the succession of moments, the discreteness of the manifold supervenes on the qualities of the

moments. As in the previous chapter these two elements emerge as two sides of the same coin.

Furthermore, thinking in this way might offer a more satisfying response in that it offers to explain why Hume focused on intrinsic features when responding to what seems like a problem of extrinsic relations: because discreteness relies on these intrinsic features, it is the intrinsic properties of moments that allow them to compose in the way they need to. In this I propose we find again this sense in which the two parts of Hume's system, the epistemology and the metaphysics, are "intimately connected": the intrinsic features of moments and the structure of time are connected because the structure exists in virtue of the intrinsic features. Once again then, seeing the connections between the parts of Hume's system and allowing each part to illuminate our understanding of the other, opens the door to making more sense of both.

3.5.1. Adequate Ideas and the Extension to Time Itself

In order to show how an extension from the phenomenal to the metaphysical is possible I will return briefly to the methodology I defended in the previous chapter. I argued that Hume is committed to there being a potential mismatch between experience and reality. As examples like the whirling coal show, we are capable only of a certain level of sensory refinement and the world is capable of more fine-grainedness than we can perceive. However, we are still able to investigate the world at these hidden levels through the perceptions we do have access to when they are adequate representations:

> Wherever ideas are adequate representations of objects, the relations, contradictions and agreements of the ideas are all applicable to the objects; and this we may in general observe to be the foundation of all human knowledge. But our ideas are adequate representations of the most minute parts of extension; and thro' whatever divisions and subdivisions we may suppose these parts to be arriv'd at, they can never become inferior to some ideas, which we form. The plain consequence is, that whatever appears

> impossible and contradictory upon the comparison of these ideas, must be really impossible and contradictory, without any farther excuse or evasion.[104]

When our ideas are adequate representations we can use them to think about the things we cannot experience. We must proceed with extreme caution, naturally, and we must ensure that we consider the ways in which our perceptions are adequate representations and the ways in which they are not. Here Hume tells us we can use simple perceptions to think about the ultimate parts of the world should it turn out to have ultimate parts. However, our perceptions only represent these smallest things to the extent that the smallest things (if there are any) are simple: it would seem to be unjustified to assume our ideas truly represent these smallest parts in all their features. Given that I take T 1.2.1. to suggest that the smallest possible things are very plausibly beyond our perception, we would be less justified, say, in concluding that these smallest things are coloured merely because our smallest perceptions are.

However, if we take him seriously as trying to talk about imperceptible parts of the world, and we take his responses to the composition and union problems as given in T 1.2.4. as expressing something about these parts, it seems we must imply this is exactly what Hume does. He appeals to colour and solidity to explain how two simple points can form an extended union. This surely is exactly the sort of attribution of phenomenal properties to the imperceptible layers of the world that would be problematic given the cautious methodology of ideas as adequate representations take I take him to prescribe. An interpretation that had him doing this would seem to be problematic. However, especially in light of the previous chapter, we might think there is something more interesting going on. Or at least this is what I will argue.

My argument in brief is this: given Hume's metaphysical methodology of appealing to the cautious use of ideas as tools for thinking about the world, the examples appealing to the behaviour of coloured points given at T 1.2.4. are best viewed as analogies to help us think about that which we cannot

[104] T 1.2.2.1; SBN 29.

experience. Insofar as they are simple, simple perceptions can help us think about the smallest possible parts of the world because they too would be simple. Analogously, insofar as it is discrete, the experiential manifold that these perceptual points create can help us think about the temporal and spatial structure of the world at its deepest levels because this too, for Hume, is discrete. In his arguments against infinite divisibility Hume exploits these lines of analogy. I suggest we entertain the idea that he also exploited these same lines of analogy in addressing the problems he considers at T 1.2.4.

Along these lines I suggest there is a fairly straightforward way of extending the response from phenomenology to ontology. Thought of in this way, Hume's examples of coloured points show us that two simple things existing in a discrete manifold can form something extended because the size of the compound is not a function of the size of its components. Similarly, in a discrete manifold, there is no reason why two points cannot lie contiguously without annihilating each other because in a discrete manifold they can lie contiguously without the overlap that would result in collapse. If this is true of our perceptions, and our perceptions truly are adequate representations of the world, then we can see that such a model is possible for the world too. If such an extension is indeed available it opens the door to our avoiding the composition and union problems not only for phenomenology but also for metaphysics. Here is one way of expressing the thought:

> i. Our simple ideas are, insofar as they are simple, adequate representations of the simple parts of the world (be they temporal moments or spatial parts).
>
> ii. Our experiential manifold is, insofar as it is discrete, an adequate representation of the discrete spatio-temporal structure of the world.
>
> iii. "Wherever ideas are adequate representations of objects, the relations, contradictions and agreements of the ideas are all applicable to the objects…" (T 1.2.2.1; SBN 29)
>
> iv. Therefore, if a solution of this sort provides a successful model in the case of phenomenology, it can provide a successful model in the case of ontology.

If this holds, we might think Hume's metaphysics can be defended in the face of these challenges. However, at this point one might raise the following objection: the discreteness of the manifold and the simplicity of the perceptions do not seem to be the only things that entail the successful result in the phenomenological case. Although the addition of colour or solidity alone did not seem to be capable of addressing the composition or union problems, the fact that the points possess these intrinsic features does seem to play a role. That the coloured points are coloured is not what enables them to form an extension in one respect (as Falkenstein argued, they form an extension because of how they are positioned in a discrete manifold): however, it is clearly important in that, were they not coloured they could not take up any position within the manifold. In fact, were the points neither coloured nor tangible, we would have neither points nor a manifold at all.

In his arguments against the extensionality of vacuum and the temporality of time without change, Hume makes it clear that our concepts of time and space are only applicable to certain kinds of things. In the case of time, duration requires succession. Just as I interpret Hume as accepting spatial parts too small to be perceived, so too I take him to accept moments too brief to be perceived. If this is the case then the smallest parts of space and time cannot just be attributed phenomenal qualities. However, they still need some intrinsic features in order to compose a manifold which can be correctly said to be temporal or temporally structured. Something must be said about their intrinsic features, then, and how these ensure the right kinds of extrinsic relational structure.

3.5.2. The Interplay between the Intrinsic and Extrinsic Features of Moments

Before addressing these questions regarding the nature of moments it is necessary to highlight once again the conditionality I raised during the previous chapter: in order to makes sense of the world as temporal at all,

given what it is for anything to exhibit a temporal structure on Hume's account, certain things must be true of the world. As such, I will operate on the assumption that, whatever else the world beyond our perceptions is like, if it is to be temporal at all, it consists of existing things of some sort and what exists is not always the same. Only if this is so do we have something which can appropriately be called temporal. If the world is not like this then it will simply be the case that our concept of time fails to apply. This is not to assume the existence of an external world, nor is it to assume the temporality of the world: instead it is a nod to the conceptual requirements Hume's theory places on the possible ways something can manifest temporal structure and the kinds of things that can appropriately be called temporal, given our concept of time. It may well be that there is nothing beyond our perceptions (though Hume notes the extremism of such a view in his dismissal of phenomenalism as the domain of only the most "extravagant sceptics").[105] Equally it may well be that whatever is beyond our perceptions does not change and so is not successive. If this is the case then the world simply is not the kind of thing that can have our concept of time applied to it. If the world is to be temporal at all though (given our only understanding of what it is to be temporal), it must exhibit these features in order that our concept be applicable. If it does not exhibit these features then all bets are off.

Returning to the nature of the moments of time then, we can again consider their intrinsic features, this time in relation to the composition and union problems. Can the intrinsic features of moments, even if they are not phenomenal, support the capacity of these moments to compose and form unions within a discrete manifold? In the previous chapter I argued that Hume's rejection of abstraction resulted in certain constraints on our ideas of time and of moments: our idea of time is nothing over and above a

[105] See T 1.3.2.49; SBN 214, where he notes that phenomenalism (as he puts it "rejecting the opinion of a continu'd existence" or the continued existence of objects even during interruptions of our perceptions of them) "has been peculiar to a few extravagant sceptics; who after all maintain'd that opinion in words only, and were never able to bring themselves sincerely to believe it."

complex idea of successively occurring perceptions.[106] Similarly, a moment is nothing over and above what exists at a point in that succession. Or, more broadly, our idea of time is an idea of an ordering of existents and our idea of a moment is nothing over and above an idea of some coexisting existents. In Hume's words: time is "nothing but the manner, in which some real objects exist."[107] As such, it is the presence of existing things that enables the applicability of the concepts of time and moments to experience. If we have an unchanging experience then we have an experience of a moment of time. As soon as there is a change, however small, in our experience, we have an experience of duration because (again employing the Separability Principle and Hume's simple/complex distinction) we have an experience that can be broken down into distinct earlier and later parts. This all concerns the concept of time. However, as I have argued there is a sense in which the concept of time constrains the kind of world that could properly be called temporal.

As a toy illustration, imagine a universe in which all that exists is a red cube, which is replaced by a blue cube. (For this example it does not really matter whether we think of it as change or replacement). This simple world history has duration in that it can be broken down into an earlier part (consisting of the red cube) and a later part (consisting of the blue cube). For now, ignore how and whether we would interpret this as temporal – that is an epistemic issue. Here we can just stipulate that in fact this is what the universe consists of at the stages in its history. In this simple universe, there are two and only two moments, the moment consisting of the red cube and the moment consisting of the blue cube. Each moment is nothing over and above what exists at that stage in the succession, which is the cube, particular in its properties. Each moment, then, is spatially complex to the extent that the cube is, but nevertheless temporally simple: for in this universe only one change occurs so there is only one line of division into moments that is

[106] One thing that makes the picture slightly more complex than I state it here is that the idea is also a general idea and so has a more complex structure. The nature of the general idea will be discussed at much greater length in chapters 6 and 7: however, we can safely leave this complexity aside at this point in order to make the minimal point required.
[107] T 1.2.4.28; SBN 64.

possible and this division is only possible because of the properties of the things that exist.

Scaled up to a world like ours we can think of the situation in terms of moments which are likely to be extremely spatially complex: however, again, they will be temporally simple. And they will consist of all and only what exists at that particular stage in the succession of the world, particular in all its details. These temporally tiny chunks of the world may change at a rate far beyond what humans can perceive and so, to that extent, any particular moment and indeed, any contiguous pair of moments might be indiscernible to us. However, each moment is distinguished from the moment before and after by a change in what exists. Change introduces difference, allowing the only grounds upon which we can characterise the situation in terms of earlier and later parts.

This is the sense in which I suggest that the moments of a temporal world have intrinsic features: they have them because they are sums of determinate existing things. Importantly, we can now see that these intrinsic features enable the moments of time to form durations in a way that is essentially analogous to the way in which being coloured enabled the blue and the red point to form an extension in Hume's example considered above. In both cases the nature of the component parts dictates something about how these components can exist in relation to each other. Two coloured points cannot coexist without one being annihilated. In the case of time, the fact that each moment expresses a distinct way the world is, and the differences between moments, also entail that they cannot coexist. It is once again the intrinsic features that matter here, but those intrinsic features dictate something of the possible extrinsic relations these elements can fall into. Specifically, because they express contradictory states of affairs, the intrinsic features of moments dictate that they cannot coexist.

Taking a duration composed of two moments, each moment is a total state of the world, which we can think of as the set of all things that coexist at that time, complete in all their particularities. However, in order to say that

we have two moments not one, there must be differences between these sets of existents. Otherwise they would not be distinct moments. However, if there are differences between them then they cannot coexist because the world cannot be two different ways at the same time. In the case of the red cube replaced by the blue cube the change in qualities of the cube entailed the existence of two distinct moments, each characterised by what exists and its qualities. The two moments consist of the world in two contradictory states. As such they exclude each other from their own "space" as efficiently as the red point and the blue point do in Hume's example at T 1.2.4. The moments may lie contiguous to each other and occur successively, but they cannot coexist because the world cannot be in two contradictory states at the same time.

3.6. Conclusion

The intrinsic qualities of moments (along with the Humean conceptual truth that duration (essentially two or more moments) requires succession and so difference between what exists at different moments in the duration) dictate something of how moments can compose: moments cannot coexist and so they must exist successively.[108] Given this, I suggest that Hume's intention to meet the composition and union problems by appeal to the intrinsic features of the elements involved was not actually so misguided. The simplicity of moments and their intrinsic features dictate both that any temporal manifold must be discrete and that the moments of this manifold cannot coexist. This is why the moments of time cannot collapse down into a single atemporal instant as Johnson feared above. What prevents this collapse is the reality of what exists itself, for moments are nothing over and above what exists in the world. Moments compose, then, in virtue of their intrinsic features and the way that these features dictate they exist in relation to each other. And given these intrinsic features, there seems no barrier to composition, nor to

[108] To link these thoughts once again to the previous chapter, this is essentially the point I think Hume is making in his third argument against infinite divisibility. The charge is that infinite divisibility entails coexisting moments; however, due to the very nature of moments, it is a contradiction to suppose they coexist. In order to see why this is a contradiction I argue we must consider what a moment is for Hume. If we do this though, we see that they truly cannot coexist, for the reasons I give here.

simples forming a union. Collapse being ruled out means there is no bar to simple things existing contiguously, nor is there any reason why simple things cannot, by contiguity, compose something which has duration. For all that is required that there be a duration is that there be two successive moments.

In summary, I have argued that, contrary to the challenges set out above, the simplicity of Hume's moments does not prevent them from playing the role required of them. That one cannot have an empty moment and that no two moments can coexist are conceptual truths derived from the very idea of time as we know it. As above, it may be that this concept of time is not applicable to the world. However, if the world is such as to be called temporal at all, Hume will tell us we can know this much about its structure. What is more, given the nature of moments, just as two simple coloured points exclude each other from coexisting and yet, by lying contiguously, can form an extended union, so too do two moments of time exclude each other from their times and yet, by occurring successively, can form a duration. Hume's example as given in T 1.2.4. appeals to the behaviour of perceptual points in a phenomenal manifold; however, we can also read it as an analogy and see that the lesson it suggests carry over to an external world, should there be one.

Read in this way, Hume's theory of the metaphysical structure of time and space is integrated and defensible. Rather than taking his comments at T 1.2.4. to constitute a confused solution that fails to address problems he explicitly recognised and aimed to avoid, we can interpret these comments as fitting into a broader methodology of using adequate ideas as tools for doing cautious metaphysics. When we do so, I suggest we can see that the nature of moments is less problematic than it initially seems, and that they may be capable of playing the role required of them. Having taken himself to have seen off the viability of infinitely divisible space and time, Hume's approach emerges as a clearly distinct option when compared to the alternatives he rejects: unlike physical points his elements are simple, unlike mathematical points they possess all the reality of the world that are, in fact, the parts of.

In this way the properties of the existing things grant them a kind of substantiality that mathematical points do not enjoy.

The interpretation of the first part of Hume's system I have argued for suggests a unified picture of his aims and methods as well as a kind of unity in the thinking that underlies his solutions. Intrinsic features of moments and the discreteness of the manifold they compose both play a role, but these features are in effect two sides of the same coin, for the discreteness of the manifold is ensured by these very same intrinsic features. What we also find is that both sets of arguments are motivated by core principles set out in the first part of the first book of the *Treatise*. His rejection of abstraction by separation, the Separability Principle, and his characterisation of the simple/complex distinction all play central roles. These elementary principles also motivate and inform the concept of time which he sets out in T 1.2.3. It is to the nature and origin of that idea which I will turn to next.

4. Forming Ideas of Particular Times: the Challenge of Asymmetry

4.1. Introduction

In forming the idea of time, Hume tells us we proceed through two stages: first, we form ideas of particular times, that is, ideas of particular temporally complex events. Second, upon coming to feel a resemblance between these particular ideas, we associate them together and, by these connections in thought, form a functionally-abstract general idea of time. Hume's depiction of this process is neat and quick, seeming to follow on nicely from the discussion of abstract ideas which ended the first part of book 1 at T 1.1.7. In spite of the neatness, when one presses for detail the brevity and smoothness of his explanation become something of a hindrance: at each stage in the process we find questions and concerns but in order to fill in the details it becomes necessary to look further afield.

Even before pressing for details one might think there are challenges that are apparent closer to the surface. One pressing interpretive question that arises is in seeing how the ideas of time and space sit alongside the so-called Copy Principle, which can sometimes feel like the inviolable core tenet of Hume's empiricism. Hume references this principle in the opening section of his discussion of these ideas and highlights its role as a tool in our investigation.[109] And yet the ideas that emerge appear to be strangely in tension with this principle; certainly not the clear exemplification that one might expect to immediately follow a reiteration of it. Some take the ideas of time and space to constitute a flat-out violation, Kemp-Smith, for example, suggests that the section on these ideas "opens with a recapitulation of the principles insisted upon in the opening sections of the

[109] He also notes the idea of extension as an example of something to which the principle might usefully be applied in his very first mention of the Copy Principle, "We may observe, that in order to prove the ideas of extension and colour not to be innate, philosophers do nothing but shew, that they are conveyed by our senses." T 1.1.1.12; SBN 7. This seems to further cement the idea that he did not think these ideas to be fundamentally in tension with at least the spirit of the Copy Principle.

Treatise, and it closes with teaching out of keeping with these principles."[110] Using these ideas to think about Hume's empiricism and the Copy Principle is a rewarding, if challenging, interpretive activity.

This challenging relationship with the Copy Principle exists at both stages of the process of idea-formation, that is, in forming initial ideas of particular times, and in forming the functionally-abstract general idea that emerges from these. In this chapter and the next I will consider the status of our ideas of particular times, in chapters 6 and 7, I will consider the status of the general idea. My main aim here is, in line with the methodology discussed in the introduction, to allow the idea of time to inform our understanding of the Copy Principle as much as to allow the Copy Principle to constrain the idea of time. This is to take Hume's reminder of the principle in this section seriously and yet to be charitable in our search for an interpretation. It is possible that he stated a principle and then immediately gave a violating instance (Hume does seem to have past form on this score with the missing shade of blue case often construed as an instance of this behaviour[111]). However, if this is so we can still ask why he would do this. If this is what he intended, what did he mean us to conclude about the principle? Does it admit of exceptions, or perhaps it is broader than it initially appears, does it allow for far less straightforward cases then we might have thought? If we find a conflict, what did he intend us to conclude about the ideas of time and space?

In what follows, I will explore the lines of this apparent tension at both stages of the process of idea-formation. One thing that will become apparent in these four chapters focused on the epistemology of time is that, although many of the interpretive challenges apply as much to the idea of space as of time (which serves the tendency that has existed to treat them analogously, as Hume often seems to), some difficulties seem all the more pressing in the case of time. A secondary interpretive aim will be to evaluate to what extent the idea of time presents greater challenges than the idea of

[110] Kemp-Smith (1941) p. 273.
[111] The similarities have encouraged some to draw links between the missing shade of blue case and the ideas of time and space, for an example of this see Pappas (1981) p.170.

space and what implications this must have in our analysis. As the previous two chapters noted, the moments of time, unlike the parts of space, cannot coexist. Throughout this chapter and the next I will consider this apparent asymmetry between our experience of time and space and the degree to which it introduces additional challenges for the idea of time that do not arise for the idea of space. Although we could react to the sparse nature of his account here and its apparent tensions by setting it aside as a blunder, deeper examination offers the chance at a deeper understanding of other core themes in Hume's work and so has the promise of interpretive value. Equally, to the extent that his empiricism has frequently been judged too blunt an instrument to account for the ideas of time and space, considering which mechanisms in his framework might be required to allow us to form such ideas not only offers a richer understanding of Hume's work: it also has the potential for allowing a richer understanding of empiricism and its adequacy. In short, tempting rewards are on offer.

4.2. Forming the Idea of Time: Hume's Arguments

Firstly then, it is worth looking in more depth at the treatment Hume does offer regarding this process of forming the idea of time, in order to see better exactly where the problems may or may not arise. The discussion of this process occurs in T 1.2.3. "Of the other qualities of our ideas of space and time" and, as is often the case, the origin story Hume tells us is illustrated more by consideration of our idea of space than of time. However, Hume does give us a brief outline of the story for time and it is presented, as with the idea of space, as having its origins in experience. Unlike the idea of space though, which is derived from visual and tactile experiences alone, the idea of time has a broader basis. It is "deriv'd from the succession of our perceptions of every kind, ideas as well as impressions, and impressions of reflection as well as of sensation."[112]

[112] T 1.2.3.6; SBN 34-5.

As I mentioned above, Hume begins his examination of our ideas of time and space by reminding his reader of the Copy Principle and reaffirming its value as an investigative tool:

> No discovery cou'd have been made more happily for deciding all controversies concerning ideas, than that abovemention'd, that impressions always take the precedency of them, and that every idea, with which the imagination is furnish'd, first makes its appearance in a correspondent impression.[113]

So, in seeking to understand our ideas better, which themselves are often "obscure," we should look to see from which impressions these ideas are derived. In its first statement, the Copy Principle is presented as a "general proposition" that "all our simple ideas in their first appearance are deriv'd from simple impressions, which are correspondent to them, and which they exactly represent."[114] In his restatement of the principle at T.1.2.3. though, Hume does not specify the restriction to simple ideas and simple impressions, appearing to reintroduce the principle in slightly broader terms instead. This point may prove important or it may just be a looser form of expression. Given that he has already specified the principle with exactness, perhaps Hume only wanted here to remind the reader of it and felt no need to express it in its fullest terms. However, within the context of the ideas of time and space, the absence of a limitation of the case to *simple* impressions and ideas opens up an alternative avenue: that of tracing a complex idea to a complex impression. However, although worth highlighting, detailed discussion of such a view must wait until the next chapter.

Leaving this aside for now then, Hume proceeds from reaffirming this guiding principle to an investigation of the origin of our ideas of space and time through a method of elimination. For the sake of giving a complete picture I will replicate his argument in full here including the development from ideas of particular extensions and durations to the general ideas of extension and duration. To restate though, my focus in this chapter and the next is not the development of the general idea, but instead the formation of

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[113] T 1.2.3.1; SBN 33.
[114] T 1.1.1.7; SBN 4.

the first stage of the idea, that is, ideas of particular extensions and durations. Here then is Hume's argument:

i. [E]very idea, with which the imagination is furnish'd, first makes its appearance in a correspondent impression. (T 1.2.3.1; SBN 33)

ii. Upon opening my eyes, and turning them to the surrounding objects, I perceive many visible bodies; and upon shutting them again, and considering the distance betwixt these bodies, I acquire the idea of extension. (T 1.2.3.2; SBN 33)

iii. As every idea is deriv'd from some impression, which is exactly similar to it, the impressions similar to this idea of extension, must either be some sensations deriv'd from the sight, or some internal impressions arising from these sensations. (T 1.2.3.2; SBN 33)

iv. Our internal impressions are our passions, emotions, desires and aversions; none of which, I believe, will ever be asserted to be the model, from which the idea of space is deriv'd. (T 1.2.3.3; SBN 33)

v. The table before me is alone sufficient by its view to give me the idea of extension. This idea, then, is borrow'd from, and represents some impression, which this moment appears to the senses. (T 1.2.3.4; SBN 34)

vi. But my senses convey to me only the impressions of colour'd points, dispos'd in a certain manner. If the eye is sensible of any thing farther, I desire it may be pointed out to me. But if it be impossible to shew any thing farther, we may conclude with certainty, that the idea of extension is nothing but a copy of these colour'd points, and of the manner of their appearance. (T 1.2.3.4; SBN 34)

This is perhaps our explanation of one idea of some particular extension. However, as he is seeking to explain the ideas of extension and duration generally, as opposed to only ideas of particular extensions and durations, Hume proceeds to explain how we form a general idea from these particular ones. Having experienced extensions of many different colours and

vii. [F]inding a resemblance in the disposition of colour'd points, of which they are compos'd, we omit the peculiarities of colour, as far as possible, and found an abstract idea merely on that disposition of points, or manner of appearance, in which they agree. (T 1.2.3.5; SBN 34)

And this resemblance we find appears to extend beyond the objects of sight to include also the objects of touch:

viii. Nay even when the resemblance is carry'd beyond the objects of one sense, and the impressions of touch are found to be similar to those of sight in the disposition of their parts; this does not hinder the abstract idea from representing both, upon account of their resemblance. (T 1.2.3.5; SBN 34)

ix. [Thus] [a]ll abstract ideas are really nothing but particular ones, consider'd in a certain light; but being annexed to general terms, they are able to represent a vast variety, and to comprehend objects, which, as they are alike in some particulars, are in others vastly wide of each other. (T 1.2.3.5; SBN 34)

And finally, we are given the story for the case of the idea of time. In spite of being a more "abstract" idea in that it is derived from a greater variety of sources, the formation process for it is presented as being analogous to that of the idea of space:

x. The idea of time, being deriv'd from the succession of our perceptions of every kind, ideas as well as impressions, and impressions of reflection as well as of sensation, will afford us an instance of an abstract idea, which comprehends a still greater variety than that of space, and yet is represented in the fancy by some particular individual idea of a determinate quantity and quality. (T 1.2.3.6; SBN 34-5)

From these brief comments there are a few immediate points of note: Firstly, one must take a stance on what exactly is being asserted in premise ii. when Hume tells us that perceiving visible bodies and then "considering the distance betwixt these bodies" is sufficient to "acquire *the* idea of extension." This statement is echoed two paragraphs later when Hume states that "[t]he table before me is alone sufficient by its view to give me *the* idea of extension." Here Hume uses the definite article (though the italics are mine). However, the idea of extension appears to be a functionally-general idea, that is, an idea of the "manner of appearance" of other perceptions. In the story he tells he emphasises the requirement that we experience different particular instances and, only by coming to see a resemblance between those cases, do we come to form an idea of extension rather than, say, an idea of this or that particular extension. Is it problematic that he states we can form *the* idea of extension without this, merely by opening our eyes and considering the ideas of visible bodies that arise?

It is a slightly frustrating piece of language but I think, on the whole, we need not be too troubled by it. Since he immediately proceeds to tell a story of the development of the general idea from these particular instances, I suggest we do not put too much weight on this piece of language – something more complex seems clearly to be involved in the formation of the idea of extension in general as is the case for him with all general ideas.[115] Instead I will take it for now that the visual experience of the table affords us only *an* idea of extension, namely, an idea of this particular coloured extension that we take to represent a table. In order to form *the* idea of extension from this it is still necessary to develop the idea from the particular to the general through the resemblance-association that Hume goes on to discuss.

Taking this view, the form of Hume's argument is as follows: premise i. gives us a tool by which to guide our investigations. Premise ii. details an experience of a visual extension from which we can derive an idea of extension. Premise iii. states that this idea must come either from impressions of sensation or reflexion, and premise iv. rules out the possibility that it is derived from the latter.[116] Premise v. focuses on our impressions of sensation and isolates the impressional content seemingly responsible for the idea as being the arrangement of coloured points. Premises vi. and vii. detail the process (as first set out in his discussion of abstract ideas in T 1.1.7.) by which these particular ideas become general in their representation through patterns of association; by these means particular ideas become functionally-abstract. To finish, Hume extends his discussion to the idea of time and, though noting that the idea can seemingly be derived from a greater variety of source experiences, the nature of the process by which we form it is presented as being analogous: we experience successions of perceptions of all different kinds and, by noting their

[115] An alternative response is to note the use of "considering" here. Hume tells us that "upon shutting them again, and considering the distance betwixt these bodies, I acquire the idea of extension." Frasca-Spada has suggested that the use of "considering" here might be telling and may indeed, in itself, be Hume's recognition that mental work must be done to form *the* idea of extension. For further discussion of this point see Frasca-Spada (1998), p. 70. In the next chapter I will discuss what extra work is involved. For now, though, I will set this issue aside.

[116] For an interesting discussion of whether Hume was too quick to dismiss this case see Falkenstein (1997), pp. 185-7.

resemblance to each other, we form a functionally-abstract idea of the structural similarity that temporal experiences bear to each other; in essence, that they are successive.

The ideas of time and space emerge as different but analogous ideas of the "manner of appearance" of other perceptions. Exploring their generality more fully is the work of chapters 6 and 7. However, for now, note that the formation of ideas of particular extensions and durations is a crucial step in the process of idea-formation for Hume. If we did not have such particular ideas we could not feel a resemblance between these particulars and so could not form the more developed general ideas. In order to explain the general idea, then, it must be possible from within the Humean framework to form ideas of particular times and spaces. And here, as I noted above, an apparent asymmetry between our experience of time and our experience of space threatens to make forming ideas of particular times problematic.

4.3. The Problem of Asymmetry

So Hume tells us that the processes by which we form ideas of particular times and particular spaces are analogous even if the content from which we form ideas of particular times is notably broader. However, the respective nature of our experiences of time and space appears to be in one sense disanalogous and this opens the door to an additional difficulty. Hume tells us that: "'Tis a property inseparable from time, and which in a manner constitutes its essence, that each of its parts succeeds another, and that none of them, however contiguous, can ever be co-existent."[117] Later in the *Treatise* he puts the point specifically in terms of what is available to us in experience:

> Without having recourse to metaphysics, any one may easily observe, that space or extension consists of a number of co-existent parts dispos'd in a certain order, and capable of being at once present to the sight or feeling. On the contrary, time or succession, tho' it consists likewise of parts, never presents to us more than one at once; nor is it possible for any two of them

[117] T 1.2.2.4; SBN 31.

> ever to be coexistent…Every part must appear single and alone, nor can regularly have entrance into the fancy without banishing what is suppos'd to have been immediately precedent.[118]

In these lines Hume highlights what he seemingly takes to be a key difference between the nature of extension and the nature of duration: The parts of any extension can coexist; indeed, perhaps in order to form an extension, they must for spatial ordering relies on "a number of co-existent parts dispos'd in a certain order." However, the moments of any duration cannot coexist, instead "[e]very part must appear single and alone." This property of time "in a manner constitutes its essence." In this way our experiences of time and space are disanalogous too. In spatial experience, the parts of an extension appear to be all available to experience at once; that is, the visual array itself is an instance of an extended, two-dimensional ordering of impressions. Intuitively, spatial complexity is immediately available in a way that temporal complexity is not.[119]

Although I will suggest some challenges to the apparent ease of the spatial case in the next chapter, that Hume takes the immediacy and availability of spatial complexity to be straightforward has been suggested by many: Falkenstein and Welton highlight the quotation above in support of this. Jacquette states that "there is no doubt that Hume regards extension as an immediate rather than mediated complex idea"; in support of this he references the example of the experience of the table as discussed above as a prime example of an idea of extension unmediated by memory, imagination,

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[118] T 2.3.7.5; SBN 429.

[119] It is worth noting that this asymmetry concerning the availability of temporal complexity at a time trades on a possibly illegitimate request. As briefly noted above it seems that there would be just as much of a problem in experiencing spatial complexity at a single spatial point, which appears to be a parallel demand to experiencing temporal complexity at a single time. To this extent, asking why we cannot experience time at a time it is a question that is conceptually bound to cause trouble. However, it does seem to be a contingent fact of our experience that spatial complexity is available in a way that temporal complexity is not. The nature of our experience of time seems to limit us to experiencing only simple moments in each perceptual act. However, we are not prevented from experiencing more than one spatial point in an act. As such it seems that, for all the conceptual naughtiness of the question, experience appears at least to place a practical barrier in the case of time that does not seem present in the case of space. In the next chapter I will argue we can dissolve this barrier, but for now it is worth noting that these issues muddy the water. Thanks to Jasper Reid for pressing this point.

or reason.[120] With the caveat already mentioned above regarding the table example (that what we receive is *an* idea of some particular extension, rather than the fully-blown idea of extension in general), there does seem to be support for the claim that Hume presents this process in this way. In one visual act we seem capable of taking in an extended, complex array. And when we are concerned with the formation of complex ideas this availability seems to be of use in that we might think that simples which come unified are easier to process as unified. That this unification in presentation has an effect of this sort seems to be implied in Hume's comment that: "The parts of extension being susceptible of an union to the senses, acquire an union in the fancy."[121]

However, in the case of time, the nature of our experience appears to present an additional challenge. The moments of an experienced duration progress in a succession, where each new moment, through its incompatibility with the one before, "banishes" the previous moment from existence. The parts of time must be conceived of as different to what came before and what will come after, with each new moment excluding its rivals from existence. This pattern of each new moment replacing the last and being replaced in turn is of the very "essence" of succession, and so, time. It seems in the fundamental nature of time that one does not experience its composing moments simultaneously. No duration is ever wholly present; instead only simple moments are wholly present. What exists at any moment of experience is temporally simple.

This asymmetry in the nature of our experience of time when compared to our experience of space threatens a challenge which is not easily resolved: if experience only ever presents us with temporal simples, how do we form an idea of temporal complexity? This question will cut deep to the core mechanics of the Copy Principle. In particular, it will become necessary to ask what features of experience we are capable of "copying" into ideas. Content only, or structured content?

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[120] Jacquette (1996) p.70.
[121] T 2.3.7.5; SBN 429.

In the next chapter I will consider the view that we are capable of copying into ideas not only the content of experience (the moments) but also structured content (successions of moments); that is, moments and their own unique "manner of appearance." However, many are reluctant to attribute such a view to Hume. The historical orthodoxy has Hume as an atomist and the reproduction of a structured whole rather than just simple "atoms" sits uneasily with some. The asymmetry explored here seems to imply there might be a kind of practical barrier in the case of time that does not hold in the case of space. In what remains of this chapter I will consider a range of approaches that reject the possibility of our copying structured content. These routes stay within the bounds of the Copy Principle and instead trace temporally complex ideas to temporally simple ones. I argue these routes are ultimately problematic. By showing that such views are neither consistently supported by the text, nor successful in explaining our ideas of particular times, I aim to motivate the need to consider alternative approaches, specifically, ones that would have us reinterpret the nature and bounds of the Copy Principle.

4.4. Representing Temporal Complexity Through Temporally Simple Ideas

Perhaps the most natural response to the problem above, given the means apparently available, is to suppose that, although we may only ever experience temporally simple moments, we can use these to form ideas that represent the temporally complex. There are a few different ways this might work. Firstly, I will consider the simplest form of approach. This is to form an idea of temporal complexity by some mental act of combination. Just as we might form an idea of a golden mountain by combining an idea of gold and an idea of a mountain, perhaps we form an idea of temporal complexity by combining temporally simple ideas.

Secondly, we might appeal to the presence, alongside present experiences, of memories of the past or expectations of the future. Perhaps it is the constant

accompaniment of these kinds of ideas which grants us an idea of temporal complexity. In following this line of thought it is interesting to consider the approach to the idea of time taken by St. Augustine in the *Confessions.*[122] As a comparison the case is apt in that Hume's view appears very similar to Augustine's particularly on relevant details regarding the structure of time and our experience of it. In particular, Augustine accepts the temporal simplicity of the present moment and the same commitment Hume has regarding the essential successiveness of time. As such, due to the change and conflict between moments, each of Augustine's moments must appear, to use Hume's words, "single and alone" just as they must for Hume. Augustine then sought to explain how it is we can get an idea of duration from an experience which will only ever be simple by appeal to ideas of past and future times. Since Hume does not offer us greater detail in his own exploration, considering an approach grounded in similar principles offers one way of thinking about how Hume could have proceeded. Considering the applicability and success of an approach like Augustine's to Hume's theory of time will open up some interesting problems and some possible further avenues.

Thirdly and finally, I will consider the possibility that some intrinsic features of moments can give us markers of temporal complexity. This idea is motivated in part by C. D. Broad's notion of "presentedness" and again, there are elements in Hume's theory that might allow for a route of this sort. However, in spite of some initial viability given other features of Hume's account, such an approach is neither well supported by the text nor is it, ultimately, able to allow Hume to account for the ideas we have of particular times.[123]

Hume does not give us greater depth on this issue aside of telling us that we do form ideas of particular successions. As such, the best we can do in deepening an understanding of how this might work is appeal to hints in the

[122] The similarities between Hume's commitments to time and Augustine's are presented and discussed interestingly in Bardon (2007) and also noted in Baxter (2008) pp. 20-1. For a look at Augustine's influence in this area more broadly see Mundle (1966).
[123] For Broad's discussion of the notion of "presentedness" see Broad (1938) p. 282; for comments on this see Bardon (2007) p. 5.

text and to the tools which Hume has available. In this chapter, much of what I introduce here by way of possible approaches will be ideas developed by other authors who share some core commitments. These approaches are consistent with the tools Hume had available to him and in places suggested by textual evidence. However, I do not introduce these routes as interpretations of what Hume had in mind. Instead my aim here is primarily to explore the shortcomings of this broad style of response, that is, tracing the complex idea to simple ones. Doing this is interpretively helpful (by showing that the textual support for these approaches is not consistently present) and critically interesting, for it serves to motivate the depth of the challenge Hume is facing here.

Ultimately, I will suggest these avenues are not successful. On any approach wherein the resulting idea of succession is synchronic we are forced to interpret temporally simple content as temporally complex. Since the aim is to explain our first, most basic, ideas of particular successions it seems likely we are in no position to do this. As such, these routes engender circularity and the presupposition of ideas we do not yet have. The failure of synchronic-idea approaches does, however, give us good reason to reconsider the nature of the Copy Principle and its relationship to the idea of time.[124]

4.4.1. The Simplest Form of Mental Combination

To begin, let's consider the simplest way that we might form an idea of time from simples. Seeing the shortcomings here will go a way towards highlighting what a solution to this problem might require. So, though we only ever experience temporally simple moments we have no trouble in forming temporally simple ideas from them. Why should we not just say that we combine some number of temporally simple ideas to form a temporally complex idea in the same way that we might mentally combine the idea of

[124] For some particularly pertinent discussions of the problems with these kinds of routes in relation to the challenge faced by Hume (amongst others) see Bardon (2007), Falkenstein (1997), Johnson (1989), Mabbott (1951), and Mundle (1966).

gold and the idea of a mountain to form an idea of a golden mountain? Considering the case of extension makes the problem with this perspicuous.

I take then my idea of a spatially simple blue point, and a second idea of a spatially simple red point. (Though we rarely experience such simples, let's say that I have been engaging in one of Hume's experiments to find visual minima: perhaps I have been viewing ink spots at a distance, or merely dividing my ideas until I find I have arrived at an idea I cannot conceive any division in). Could I not simply mentally position these two ideas alongside one another to form an extension? It seems I can: however, doing so involves appeal to a prior notion of spatiality. To position ideas alongside one another involves manipulating points in a spatial array; seemingly the capacity to place points alongside one another involves some notion of things' being alongside one another. However, these are inherently spatial notions. The idea of extension is, for Hume, the idea of a certain manner of appearance. Although points arranged in conformity with this manner of appearance will constitute a visual extension, it is key that my success in creating this idea involves employing a prior notion of "alongside" that I would not have unless I already had some experience of extended spatial arrays and some idea of what the spatial "manner of appearance" was. Performing the required act of mental combination then, involves presupposing a familiarity with the relevant idea of extension. Thus circularity ensues.

Analogously, in the case of time, it would not be enough for me to create an idea of succession by merely conceiving of many simple moments. I would have to also conceive of them as occurring successively. But here we are trying to explain how we form our most basic and rudimentary ideas of succession that are required in order to form a general idea of a successive manner of appearance. As such, we can hardly include a notion of their occurring successively without presupposing the very idea we are seeking to explain. Once again, we arrive at circularity. The failure of this most basic attempt at explaining the origin of our ideas of particular successions does not spell failure for all attempts of its kind. However, we will find that

circularity problems arise again and again, even with more developed accounts.

4.4.2. St. Augustine and Time in the *Confessions*

St. Augustine's approach is one such more developed account. As noted above, this account offers to be illuminating for us in that Hume appears to share many of Augustine's basic commitments regarding the ontology and experience of time. Durations consist of more than one moment of time and time consists of a succession of moments, where change between moments marks their succession. For Augustine, as for Hume, this change is what entails that moments cannot coexist, thus: "a long time is long only because constituted of many successive movements which cannot be simultaneously extended."[125] Our world (as contrasted with the eternal realm in which "nothing is transient, but the whole is present"[126]) is temporal insofar as it manifests change through this succession of states which replace each other in existence. Hume's use of the idea of "banishment" echoes this theme in Augustine where "all past time is driven backwards by the future, and all future time is the consequent of the past, and all past and future are created and set on their course by that which is always present."[127] For Augustine the contrast case to our changing, temporal natures is the nature of the immutable deity:

> Your 'years' neither go nor come. Ours come and go so that all may go in succession. All your 'years' exist in simultaneity, because they do not change; those going away are not thrust out by those coming in. But the years which are ours will not all be until all years have ceased to be.[128]

This idea of succession as replacement motivates, for Augustine, the same commitment as Hume's notion of "banishment": that of a single, temporally simple present moment. For, if duration requires succession, which in turn requires replacement, no single moment can have duration. Instead longer

[125] *Confessions*, Book XI, section 13, p.228.
[126] *Confessions*, Book XI, section 13, p.228.
[127] *Confessions*, Book XI. section 13, pp. 228-9.
[128] *Confessions*, Book XI. section 16, p. 230.

and shorter times all rely on the passing of simple moments. The present moment itself, Augustine assures us, has no duration:

> If we can think of some bit of time which cannot be divided into even the smallest instantaneous moments, that alone is what we call 'present'. And this time flies so quickly from future into past that it is an interval with no duration. If it has duration, it is divisible into past and future. But the present occupies no space.[129]

The present moment cannot be "long": it is simple, not successive, and so has no duration. It endures only until a change introduces the next moment. If only the present moment exists, Augustine questions how it is that we measure time. His solution is that we supplement what exists now with memories of the past and expectations of the future and, by these means, bring into existence representations of that which does not exist to hold alongside that which does. In this way we employ the mind to supplement the temporally simple present:

> What is by now evident and clear is that neither future nor past exists, and it is inexact language to speak of three times – past, present, and future. Perhaps it would be exact to say: there are three times, a present of things past, a present of things present, a present of things to come. In the soul there are these three aspects of time, and I do not see them anywhere else. The present considering the past is memory, the present considering the present is immediate awareness, the present considering the future is expectation.[130]

The present is all that exists: however, some of what exists refers to what has been or what will be. Getting a sense of duration for Augustine seems to involve a kind of supplementation by the mind of ideas of other times. In this sense, time is ideal, and reliant on the mind: "My confession to you is surely truthful when my soul declares that times are measured by me."[131]

This developed, and yet intuitive, response offers one way of aiming to meet the challenge posed earlier to Hume, and from a theoretical position not

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[129] *Confessions*, Book XI, section 20, p.232.
[130] *Confessions*, Book XI, section 26, p. 235.
[131] *Confessions*, Book XI, section 33, p.239.

unlike Hume's own.[132] Two questions emerge from this: firstly, though he clearly did not explicitly recognise this route, does Hume have the resources available to adopt such an approach to forming the idea of time? Secondly, if he does, would adopting such a route allow Hume to meet the challenge posed above? I suggest the answers to these questions are yes and no, respectively.

Firstly then, the answer to the first question seems to be yes: Hume's account does possess the resources necessary to make moves of this sort and he does at times talk in a way that supports such a reading. To Hume, all experience amounts to experience of perceptions, be they impressions or ideas, and the work the principles of association do mean that we find what we take to be experiences of "now" constantly accompanied by associated memories of the past and expectations for the future. In accordance with the principles of association (resemblance, contiguity in time or space, and causation), our experiences are at every moment accompanied by fleeting associated ideas. Perhaps, just as an experience that resembles a past "cause" from a cause-effect pair can provoke a vivid expectation of some certain "effect," so an experience deemed to be of the present now is accompanied with present memories of past times, and present expectations of the future. Could this phenomenon give us the means to form a basic idea of succession?

To begin, let's consider a toy example ("toy" to the extent that experience presents us with a far more complex phenomenal array that this at seemingly all times; and equally in that each "moment" here is probably temporally complex. However, I leave these points aside for now for the sake of simplicity). I experience a succession: at t-1, I see the second hand of the clock at 12 o'clock precisely; at t, I see the second hand at 12.01; at t+1, I

[132] Baxter, in his discussion of this, argues that Hume's ontology differs to Augustine's in that Augustine is committed to the existence only of the present moment, whereas Hume is committed to the slightly different thesis that, as Baxter puts it, "[s]uccessive parts of time exist, just not all presently." (Baxter 2008, p.20) For the problem at hand, though, this does not seem to me to help. Given only the present exists presently, we still face the problem that anything not present must be represented as such. So the requirement that we explain how we are able to interpret some content as non-present in a way that would give us an idea of temporal complexity remains.

see the second hand at 12.02. How to characterise this? (In an attempt to illustrate this example a little more clearly, I will be use bold type for impressions and regular type for ideas.) Focusing in on my experience at t, the present moment, it seems that it likely contains the sorts of elements Augustine discusses. I am undergoing some present impression **P** of the second hand at 12.01; at the same time I have an accompanying idea of memory M of the second hand at 12.00. Given my extensive past experience of staring blankly at clocks, I also have an expectation E (again an idea), of seeing the second hand at 12.02. The totality of my experience at t seems to be a temporally simple one: namely, "M**P**E." Such experiences seem likely to be common on Hume's account. Turn now to the second question of whether an experience of this sort could allow Hume to meet the challenge faced. That is, could the present experience "M**P**E" afford us an idea of temporal complexity?

I do not see how it could. The moment in which I have this experience is itself simple. As such, even though elements in this experience purport to represent other times, the compound experience itself is still temporally simple: it is a synchronic experience consisting of two ideas and an impression. Even if we specified that M is not a false memory (though we would have no access to the means to do this) and so really does refer to a previous time, the experience I am having is still, in itself, temporally simple. If I copy this experience into an idea, the idea I form is also temporally simple. Although in our example, the parts of this experience would correspond to at least two different times (and hint at a third), the idea itself, being entirely synchronic, appears to be an experience of simultaneity not succession. Without an understanding of what the elements represent, an idea copied from this experience would seem to be just as temporally simple as the experience it copies. And yet, given we are trying to explain the formation of our very first ideas of time, there seems no way we could impose such an understanding.

This simultaneity concern is highlighted by Bardon in his discussion of this problem.[133] If what is before my mind in experience *right now* is a mixture of impressions and ideas, though it is true that they are different, and may even contain parts which correspond to different times, the idea itself is synchronic. Since both the current impression and the remembered idea or ideas are all together before the mind, they do not form an experience of a succession but an experience of a simultaneity. In short, an experience of M and **P** is not an experience of M *then* **P**.

4.4.3. Intrinsic Markers of Temporal Complexity

So the conscious combination of temporally simple ideas appears to be problematic, as does the copying of experiences which represent temporal complexity but are themselves temporally simple. One line of response that might be tempting at this point is to point to intrinsic qualities of the ideas and appeal to those as in some way indicating temporality. If we can employ intrinsic features to indicate or suggest a temporal interpretation of a synchronic idea we might find we can avoid the need to impose a temporal interpretation that we are not, at this point, in any position to give. If this could be achieved we might find a route to avoiding the reoccurring circularity.

C. D. Broad considers such a route though he was ultimately not entirely optimistic as to its success. He suggested that there is an aspect of certain mental contents one might call "presentedness." In the case imagined above, it is what marks **P** as different to M. The element of the experience we take to constitute the present impression is forceful and vivacious; the memory part is fainter and weaker. Broad considered the idea that the quality of presentedness came in degrees and that the decline in strength correlated with the "age" of the perception. Such a route does seem available to Hume and, though not strongly suggested by the text, it does cohere to some extent with his account of memory as, in looking to distinguish genuine memories from those ideas of the fancy that we might conjure up in our

[133] Bardon (2007).

heads, Hume does seem to point to the intrinsic force and vivacity as part of what the difference amounts to:

> Since therefore the memory is known, neither by the order of its complex ideas, nor the nature of its simple ones; it follows, that the difference betwixt it and the imagination lies in its superior force and vivacity. A man may indulge his fancy in feigning any past scene of adventures; nor wou'd there be any possibility of distinguishing this from a remembrance of a like kind, were not the ideas of the imagination fainter and more obscure.[134]

If the ideas of memory are marked by their being more vivid, though not as vivid as impressions, we might think that there is room for Hume to make a similar move to Broad's. That is to say that impressions of how the world is now are most vivid; memories of how it was a moment ago are less vivid, but still more vivid than mere inventions of the imagination.

One might object at this point that the phenomenology does not support this. In particular, it seems very implausible to suggest that there is a consistent gradual fade across all memories. Some memories long past are far more vivid that the memory of what I had for breakfast yesterday. However, it is importantly to note that, given we are only trying to form a very basic idea of succession at this point, it may not matter that this marker does not consistently extend. Perhaps it could be enough that it extend over a very short sequence, such as in the clock example given above. Limiting things even just to the intrinsic difference between M and **P** as a pair, perhaps this can be employed in order to explain how the synchronic idea M**P** gives us an idea of succession? Unfortunately, this approach also seems to encounter a number of difficulties that limit its success.

Firstly, it seems it would face all the difficulties that Hume's impression/idea distinction already faces. Hume has no grounds available on which to maintain that ideas and impressions are different in kind since his introspective method of analysis offers us no way to use origin as a principle of individuation. Impressions and ideas are all on a par as being perceptions and can be picked apart only by generally, though not invariably, possessing

[134] T 1.3.5.3; SBN 85.

characteristic degrees of force and vivacity. In certain cases that Hume discusses, for example "in sleep, in a fever, in madness" we seem to have ideas which approach the force and vivacity of impressions.[135] It is already problematic on what grounds Hume can maintain that such cases are not simply cases of impressions that come from the mind: after all, they are comparable in their intrinsic qualities and feel to impressions and, with no appeal to point of origin, there do not seem to be immediate grounds on which to exclude them. These are complex questions and by no means does Hume have no tools by which to address them, but any account which attempted to adopt an approach involving something echoing the notion of presentedness would seem to be under an obligation to say something about how we should.

Secondly, thinking in this way does not make clear what we should say about future expectations of how things will be, and yet these play an integral role in Hume's account of causal reasoning and so permeate rather a lot of his theory of our experience of the world. St. Augustine made room for future expectations in his account, but if we adopt this notion of vivacity as presentness we might think Hume's acceptance of expectation creates problems. For Hume, such expectations arise through powerful mental connections between ideas such that the expected effect of an experienced thing can strike one forcefully ("if we think of a wound, we can scarcely forbear reflecting on the pain which follows it"[136]). This feature of being forceful and striking seems to characterise many of our causal expectations and marks them as believed, on a par with memories in the sense of being conceived with a certain kind of force and steadiness. However, if being vivid (though less vivid than impressions) is a marker of both the past and the future, how can force and vivacity indicate temporal ordering? As Hume highlighted in his comments on memory above, we do not have access to the original impressions to compare our ideas with what has happened: so if we really are left with force and vivacity alone as an indicator it seems too impoverished a notion to do the job in hand.

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[135] T 1.1.1.1; SBN 2.
[136] EHU 3.3; SBN 23.

Furthermore, we would have to make sense of other parts of the text that seem to count against this position. For example, where Hume attempts to account for the phenomenon that he finds in himself that distance in time weakens the conception of an object, and distance in past time has a greater effect than distance in the future. He remarks that, because we're used to experience progressing from one moment to later ones as opposed to receding into the past, we find that our imagination runs smoother forwards in time than backwards: "fancy flows along the stream of time, and arrives at the object by an order, which seems most natural, passing always from one point of time to that which is immediately posterior to it." And this smoothness appears to impact on our strength of conception so that "[a] small degree of distance in the past has, therefore, a greater effect, in interrupting and weakening the conception, than a much greater in the future. From this effect of it on the imagination is deriv'd its influence on the will and passions."[137] It does not seem that even Hume thinks that vivacity fades uniformly, again telling against a reading of this sort.

Thirdly and finally (and perhaps most damningly), even if the intrinsic force and vivacity of perceptions did reliably and consistently track temporal ordering, it is not clear how exactly this comes to be interpreted as temporal by us prior to our possessing some idea of temporal complexity (and, as before, this is the very idea we are attempting to form). Let's say that I have before my mind the complex simultaneous idea/impression M**P**, and that M and **P** do have different intrinsic qualities. One can still ask why, before I have any notion of temporal complexity at all, these intrinsic differences of quality could or would be interpreted as marking a difference in temporal ordering. It seems there is nothing intrinsic to force and vivacity that implies presentness, not faintness that implies pastness or futurity. The idea M**P** is still synchronic and what is before the mind is still a simultaneous set of ideas and impressions. It is simply a simultaneity with parts which possess different degrees of force and vivacity. In order to interpret this as indicating something temporally complex it seems we need to have already some idea of temporal complexity. Once again then, the charge of circularity ensues.

[137] Both from T 2.3.7.9; SBN 431.

Without a notion of temporal ordering being applied to this experience, it just is not clear why force and vivacity would be taken as a marker of presentness.

One might be tempted to respond that, although force and vivacity do not intrinsically mark something out as present, the constant conjunction of these qualities with impressions, that is, sensations which we are having *right now*, means we come to associate force and vivacity with presentness. This feels a Humean sort of response and yet again it is inadequate. For we are also having *right now* a number of fainter ideas. Why then would we not also associate faintness with presentness? It does seem that Hume takes our understanding that ideas are copies of impressions to be fairly immediate and intuitive. However, it is still not something we simply see when we introspect. Instead we arrive at the idea that ideas are copies by introspectively noting both intrinsic features and that, of the pairs of perceptions, one sort seems to always precede the other.[138] Again then, this interpretation seems to involve the application of some notion of temporal ordering, and again, we cannot presuppose that we possess this idea since it is the formation of it that we are concerned with here.

4.5. Conclusion

If we must rely only upon copying temporally simple ideas, I suggest we find ourselves in no position to form an idea of temporal complexity. The above routes all require a kind of interpretive spin of temporal complexity onto temporally simple content and we are in no position to perform this prior to our forming the most basic ideas of times. If Hume's account is limited to accounting for the idea in this way, we might concede the critical charge that his approach is doomed to circularity for, if we are required to presuppose the possession of the very idea we are seeking to form, it surely is. We cannot apply an idea of temporal complexity, of a successive manner of appearance, before we have formed these most basic ideas of particular successions, let alone formed the idea of a successive manner of appearance

[138] T 1.1.1.7; SBN 4-5.

in general. Without already possessing an idea of temporally complexity, and thereby interpreting simple content as temporally complex, it seems we cannot perform the mental acts required by the approaches I have considered so far.

Given the essentially successive nature of time, if we privilege the Copy Principle as a rule which dictates that we can only form ideas of temporal simples then it seems we face a serious challenge in forming ideas of particular times. In the next chapter I am going to consider two lines of response to this. The first, forwarded by Frasca-Spada, involves accepting that the ideas of time and space constitute a violation of the Copy Principle. The second approach I will consider receives its fullest expression in Falkenstein, though can be found in other places too. He argues that the ideas of time and space do not constitute a violation of the Copy Principle but an extension to it. This chapter, I propose, shows us that something in this principle must either bend or break, and that we might do well to allow Hume's commitment to our possessing the ideas of time and space to tell us something of which it is.

5. Forming Ideas of Particular Times: the Role of the Mind

5.1. Introduction

In answering the challenge of how we might be able to form an idea of temporal complexity in spite of the fact that experience only ever presents us with temporal simples, how we interpret the Copy Principle becomes extremely important. In this chapter I will look at two very different approaches to understanding the nature and bounds of the Copy Principle in light of Hume's commitment to our having ideas of time and space and at their implications for how we understand the ideas that emerge.

Firstly I will look at the approach forwarded by Frasca-Spada, who stresses the sense in which these ideas constitute a violation of the Copy Principle. She argues that its role is more in guidance, it is an investigative maxim that grants us a better understanding of ideas by showing exactly what is and what is not accounted for by sense experience. In the case of the ideas of time and space, it shows us what is left unaccounted for, namely, the ordering or manner of appearance of the simple components. On account of this, she argues that the ideas of time and space are not simply given in impressional content, instead they mark "an original contribution of the mind to sense experience."[139] We cannot simply extract these ideas from experience, instead the mind must be at work from the off in order that they become available.

The defence of this is interesting and drawn with sensitivity from the text. However, one might feel a degree of reluctance in allowing such a contribution by the mind. Even if the Copy Principle keeps a central role, to allow that Hume recognised certain ideas to be not derived straightforwardly from experience has made some uncomfortable and so others have sought instead to extend the Copy Principle such that it is not violated by the ideas of time and space. The second line of approach I will consider strives for

[139] Frasca-Spada (1998), p.59.

this. Specifically, the move is to argue that these ideas demonstrate that we are capable of copying not just simples but arranged simples, that is, simples along with their manner of appearance.

This second approach has some initial pay-off. In the previous chapter I considered ways of trying to account for the idea of time in spite of our being limited by the unavailability in direct experience of the temporally complex. Being limited to copying only simple moments, the ideas we formed were correspondingly simple. This led to the requirement that we interpret temporally simple content as temporally complex, a requirement that I argued consistently led to circularity. If we posit this extension to the Copy Principle, however, and suppose that we can copy not just simples but arranged simples, it may be possible to avoid this circularity. Because the resulting idea is already temporally complex there is no requirement to impose an interpretive spin on it that we cannot yet impose. By these means circularity is avoided, though we must accept a somewhat unusual view of representation. Examples of approaches of this sort can be found in Costa, Falkenstein, and Garrett.[140]

However, when we press this second avenue it becomes impossible to maintain it without accepting a greater role for the mind even if it is possible to account for ideas of particular times without encountering the circularity that arose time after time in the previous chapter. My ultimate aim here is to show that, whether or not one wants to, it is impossible to exclude the mind from playing a significant role in the formation of ideas of particular times. The picture that emerges is not unHumean: recognising the influence our own cognition has upon the ideas we form is undoubtedly one of Hume's aims. However, whether we interpret the Copy Principle as bending or breaking, these ideas sit strangely alongside it and contain integral elements which are better traced to the mind's activity than to impressional content.

[140] See Costa (1990), Falkenstein (1997, 2006), Garrett (1997). For discussion of this approach particularly in light of circularity concerns see Allison (2008) chapter 2 and Bardon (2007).

5.2. The Ideas of Time and Space as an "original contribution of the mind"

Firstly then, we might take the lesson of the previous chapter to be that there is a significant problem in accounting for ideas of particular times within the bounds of the Copy Principle. The ideas of time and space are ideas of the manner of appearance or ordering of other things. They are not given in any separate and separable impression and, whether or not one thinks that we can copy spatial complexes in one act (of which more later), this option does not seem to be immediately available for the case of time because of the contingent but problematic asymmetry in our experience. The idea of time, then, appears to sit uneasily alongside the Copy Principle in its current formulation. One might very well conclude that something must bend or break. To begin I am going to consider Frasca-Spada's interpretation on which the ideas of time and space violate the Copy Principle. However, as she notes, this does not mean this principle is without value, or indeed, an important role in Hume's work. Instead its role is negative: it shows us what experience cannot account for, which we must instead infer to be the additional work of the mind.

She argues that, when we apply the Copy Principle to our ideas of time and space, we find that the crucial manner of appearance is left unaccounted for. Considering an experience of extension Hume notes that "my senses convey to me only the impressions of colour'd points, dispos'd in a certain manner."[141] If this is so, it seems the Copy Principle allows us a means to trace the simple elements, these simple impressions can be copied to form simple ideas. However, what we do not find a way to account for is the disposition or manner in which these simples are arranged. As Hume puts it in discussing the temporal case of hearing five notes played in succession, we can perfectly well account for the notes we hear but their successive manner of appearance is not some "sixth impression."[142] The manner of appearance is not, Hume makes clear, some separate or distinct impression which we receive along with the simple perceptions. Instead the manner is something

[141] T 1.2.3.4; SBN 34.
[142] T 1.2.3.10; SBN 36.

instantiated by complexes of these simples. When we apply the Copy Principle to these complex impressions, we are left with an important element left unaccounted for: the arrangement. And yet, the arrangement is the exact thing we are ultimately seeking to explain. Her conclusion is that the manner of appearance is not derived by the senses; instead it should be thought of as an "original contribution of the mind to sense-perception."[143]

As additional support for this reading, Frasca-Spada points to a number of other places in the *Treatise* where we find a gap between experience and ideas, and notes these gaps are marked fairly consistently by Hume's use of loose but evocative language. His discussion of abstract ideas, belief, and, perhaps most notably, the self all instance this. When Hume discusses not only ideas and their content but the way that ideas are had or felt by the conceiver his language bears these marks. This, Frasca-Spada takes to be "a form of acknowledgement, on his part, of the trace, in experience, of the mind's operations."[144] More explicitly,

> [the linguistic markings] never fail to be there when circumstances require them: that is, when the subject is something at once very familiar and difficult to express – something at once intimate and ineffable, something which has to do not with ideas, but with, for instance, the differences between how different ideas are felt. I suggest that, in the *Treatise*, the language becomes loose when mental contents are being described not as such, but in terms of qualities and acts of the mind. The action of the mind is described as: That certain *je-ne-sais-quoi*, of which it is impossible to give any definition or description, but which everyone sufficiently understands. (T/106).[145]

In each of these cases the ideas are "somehow more directly and specifically related to the self."[146] The resulting ideas bear indications of the mind's activity though we can only infer this activity indirectly by noting what experience cannot account for. To Frasca-Spada then, the ideas of time and space indicate that the mind has played a role in their formation. Indeed, one might think it must have played a key role given that the ordering or arrangement is exactly the core thing in these ideas. She concludes that "The

[143] Frasca-Spada (1998), p.76.
[144] Frasca-Spada (1998), p.83.
[145] Frasca-Spada (1998), p.69.
[146] Frasca-Spada (1998), p.75.

self arranges perceptions in certain orders or dispositions, and organises itself as a set of beliefs. And this is all metaphysics can say."[147] We are prevented from going further by the inaccessibility of the operations of the mind: however, by appeal to the Copy Principle we can still put our finger on what is left over and so what is required. Since the ordering itself is not traceable to experience, we can infer that it is contributed by us.

Frasca-Spada does not tell us more about exactly how the mind makes this contribution, but this is a principled decision, for Hume notes the impossibility of turning the mind in on itself to reflect upon its operations. In many places he highlights that a kind of indirect knowledge seems to be the best that we can do, that is, our knowledge of the mind's work is limited to an appreciation of its apparent effects:

> [T]he essence of the mind being equally unknown to us with that of external bodies, it must be equally impossible to form any notion of its powers and qualities otherwise than from careful and exact experiments, and the observation of those particular effects, which result from its different circumstances and situations. And tho' we must endeavour to render all our principles as universal as possible, by tracing up our experiments to the utmost, and explaining all effects from the simplest and fewest causes, 'tis still certain we cannot go beyond experience; and any hypothesis, that pretends to discover the ultimate original qualities of human nature, ought at first to be rejected as presumptuous and chimerical.[148]

We can know something of the effects of the mind's activities, so long as our experiments are careful and exact, but we cannot get to the ultimate causes. Ultimately, in Hume's words, "we can give no reason for our most general and most refined principles, beside our experience of their reality."[149]

On Frasca-Spada's account the ideas of space and time violate the Copy Principle if it is conceived of as a strict law, which is fine because the role she assigns it is different. Instead it acts as a guide and an indicator, and remains in conformity with Hume's "endeavour to render all our principles as universal as possible" which, one might think, allows for exceptions in

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[147] Frasca-Spada (1998), p.82.
[148] T Intro; SBN xvii.
[149] T Intro; SBN xviii.

certain unusual or special cases.[150] And the ideas of time and space are indeed unusual in this respect. By applying the principle to them we find that core elements of them cannot be accounted for by experience and we can infer instead that they arise as a result of the activity of the mind. On this view, even in forming our first ideas of particular times and spaces, the mind is at work and provides the ordering or arrangement that is characteristic of them.

In spite of a persuasive re-characterisation of this principle though, not everyone is happy to give up what seems such a core element of Hume's empiricism. In his assessment of this approach Allison, for example, is unwilling to allow that Hume accepted this kind of mental contribution (though he does maintain that this is what Hume *should* have said). Instead he emphasises the links Hume appears to make between the Copy Principle and the denial of innate ideas:

> The present question concerning the precedency of our impressions or ideas, is the same with what has made so much noise in other terms, when it has been disputed whether there be any innate ideas, or whether all ideas be derived from sensation and reflexion. We may observe, that in order to prove the ideas of extension and colour not to be innate, philosophers do nothing but shew, that they are conveyed by our senses.[151]

From this, Allison suggests that allowing that these ideas violate the Copy Principle is tantamount to accepting that they are innate.[152] But is it possible to explain this ordering without appeal to the mind? Next I will look at an alternative avenue of response which aims to do just this. By suggesting that the ideas of time and space constitute not an exception but an extension to the Copy Principle, some argue that it is possible to derive not just content but arranged content from experience itself. If this is so the requirement that the mind be so significantly involved can be avoided. I will argue that, even granting an extension to the Copy Principle, we cannot so easily set aside a

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[150] T Intro; SBN xvii. For more on the Copy Principle and its nature as a "maxim" rather than an inviolable law, see Frasca-Spada (1998), pp. 63-4.
[151] T 1.1.11; SBN 7
[152] Allison (2008), p. 52.

significant role for the mind, however, in order to show this let's first consider the suggested alternative.

5.3. Complex Ideas from Complex Impressions

The alternative approach I will consider has it that the Copy Principle is not violated by our ideas of space and time. However, they do constitute evidence of an interesting and underappreciated extension: that we are capable of copying complex impressions to form complex ideas. If this is correct, it is argued, there is no bar to our copying not only the simple elements of experience (spatial points and moments) but also their manner of appearance in that, to copy the complex impression, in this case, just is to copy an arrangement of simples. I will first present the interpretation along with the view of representation integral to it. Then I will forward a problem seemingly posed by the asymmetry of time and space, in essence, it is the asymmetry objection aimed at a new target. I will argue for an amendment and then suggest that, even with this amendment, this approach requires the mind to be much more active in the creation of these ideas than its proponents have so far accepted.

So, one way of viewing the shortcomings of the views considered in the previous chapter was to note that the idea that resulted, being copied from something temporally simple, was itself temporally simple. Reacting against this, we might think that what is required is a temporally complex idea. It is argued that we can form such an idea by copying not only the individual moments of experience, but also their "manner of appearance." On this view we copy not just the moments but also the way those moments occur in experience. The idea we form from this is thereby temporally complex. Falkenstein, one proponent of such an interpretation of Hume, illustrates this thought with the analogy of a photocopier:

> That this manner or disposition of parts should be copied over into the idea is ultimately no more mysterious…than that a photocopier should reproduce

> not only the letters on a printed page, but the exact order in which they are printed.[153]

Falkenstein argues in this way that our ideas of space and time do not violate the copy principle: however, they do imply an interesting extension to it in that they show that, in at least these cases of copying complex impressions to form complex ideas, we copy not only the simple impressions but also their manner of appearance. As I noted briefly above, Hume's restatement of the copy principle at the commencement of his discussion of the ideas of time and space did not specify the tracing must be to simple impressions, as it did in T 1.1.1. Instead Hume tells us that "every idea, with which the imagination is furnish'd, first makes its appearance in a correspondent impression."[154] Hume appears to think that our spatially complex idea of the table has its first appearance in the spatially complex impression of a visual array of coloured points. If we are capable of forming complex ideas copied from complex impressions this might provide us with an interesting alternative strategy.

Before more fully exploring the case of time I want to quickly address one possible concern that may arise at this point. Namely that, as even the immediately above quotation illustrates, Hume does use what appears to be singular terms at times. For example, he asks what "impression" gives us the idea of extension, and concludes it is the "impression" of "colour'd points disposed in a certain manner."[155] In the case of time he also appears to use the singular, stating that five notes played on the flute give us "*the* impression and idea of time."[156] One might think this rules out seeking a complex impression and yet the examples he uses are explicitly complex in Hume's sense of the term. The "impression" of coloured *points* could not help but be spatially complex since it consists of an arrangement of more than one simple point. Similarly, if it is a succession of notes that gives us the "impression" of time, that impression can be broken down into the notes that compose it. He may use singular language, then, but it is clear

[153] Falkenstein (1997) p. 194.
[154] T 1.2.3.1; SBN 33.
[155] T 1.2.3.4; SBN 34
[156] T 1.2.3.10; SBN 36

from Hume's examples that these impressions are, by his own lights, complex. I do not think this approach is at odds with the text in this way then and it does suggest an initially plausible way of accounting for what it could be to form an idea of a successive event. This may also explain why Hume does not labour his point in explaining how we form ideas of particular times and spaces: if he thought the case with space straightforward, and the case with time as analogous to the case of space, perhaps he did not think it required further explanation.

As further support for this view we can also consider certain comments Hume makes regarding the nature of memory, specifically, that memories preserve not only the content but also the order of experiences. For example, Hume states "the imagination is not restrain'd to the same order and form with the original impressions; while the memory is in a manner ty'd down in that respect, without any power of variation."[157] And, perhaps even more explicitly:

> 'Tis evident, that the memory preserves the original form, in which its objects were presented, and that where-ever we depart from it in recollecting any thing, it proceeds from some defect or imperfection in that faculty…The chief exercise of the memory is not to preserve the simple ideas, but their order and position.[158]

These comments do seem to lend support to the idea that in forming certain ideas, namely memories, we copy not only the impressional content but ordered content. By these means we have a faculty that preserves the ordering of experience not only the experiences themselves. Perhaps the Copy Principle is open to this broader specification then and admits that we not only copy simple content but the ordering in which that content occurs. By rejecting the idea that the Copy Principle is limited to the copying of simple content, but instead is open to copying content in the order in which it is experienced, these approaches meet the challenge expressed above head on. They do not deny that there is this asymmetry between time and space,

[157] T 1.1.3.2; SBN 9.
[158] T 1.1.3.3; SBN 9.

however, with the Copy Principle interpreted in this broader sense, they argue that the asymmetry ceases to be problematic.

If we adopt this line of interpretation then there is none of the problematic supplementation that was required for synchronic ideas in the previous chapter. The complex impressions we experience are themselves spatial and temporal and the ideas that result from experiencing them are equally spatial and temporal. They argue that, just as we can copy the spatially extended impression of the apple on the table, so too can we copy the temporally extended impression of the apple rolling off the table. As Falkenstein puts it:

> [Hume] held that while our ideas of space and time are drawn from something directly and immediately given in sensory experience, and so are not subsequently constructed, this thing is not any one simple impression. It is instead an experience of the manner in which a number of simple impressions are ordered in a compound.[159]

This line of interpretation also has interesting implications for the resulting ideas of particular times. On this view, we find that the resulting ideas represent temporal complexity by literally possessing temporal complexity. Which is to say that, by mirroring the parts of a temporally complex sequence, the idea produced literally takes time to have. As Allison put it whilst characterising Falkenstein, ideas "represent their objects by mirroring rather than by intending them."[160] They represent in virtue of being literally similar to what they represent so "[a]n idea of space represents space by being itself extended in space, not by being 'of' space; an idea of time represents time by enduring over time."[161]

This view of representation may initially seem strange but it has some merits. In particular, there are places where Hume appears to talk of ideas as "agreeing with" impressions in that they literally possess certain qualities had by the impressions they are copied from, extension among them. Consider:

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[159] Falkenstein (1997) p.190.
[160] Allison (2008) p.52.
[161] Falkenstein (1997) p.193.

> The most vulgar philosophy informs us, that no external object can make itself known to the mind immediately, and without the interposition of an image or perception. The table, which just now appears to me, is only a perception, and all its qualities are qualities of a perception. Now the *most obvious of all its qualities is extension*. The perception consists of parts. These parts are so situated, as to afford us the notion of distance and contiguity; of length, breadth, and thickness. The termination of these three dimensions is what we call figure. This figure is moveable, separable, and divisible. Mobility, and separability are the distinguishing properties of extended objects. And to cut short all disputes, the very idea of extension is copy'd from nothing but an impression, and consequently must perfectly agree to it. *To say the idea of extension agrees to any thing, is to say that it is extended.*[162] [My italics]

To the extent that the idea of extension is applicable to impressions, it appears to be equally applicable to ideas. Given Hume argues that extension consists in a certain sort of arrangement, one which is exhibited as much by ideas as by impressions, this is perhaps unsurprising. A very plausible reading of the way that my complex idea of the table represents the complex impression of the table is by consisting of copies of both the points and their positioning, or, on the view we are considering, a copy of the positioned points. But then, if we say that the impression is extended in virtue of consisting of points arrayed spatially it seems there is nothing that should stop us attributing the same quality of extension to the idea.

As noted by several commentators, the resemblance that ideas bear to impressions need not be construed as literal mirroring. Resemblance in Hume is a varied phenomenon and there are cases which do not seem captured by mirroring at all. I will discuss varieties of resemblance in depth in chapter 7, however as a quick case to consider, Hume tells us that "[b]lue and green are different simple ideas, but are more resembling than blue and scarlet."[163] Mirroring seems insufficient in this case to capture the resemblance of their colour (though it might of their simple structure). I will argue mirroring also fails to capture core elements in several other examples

[162] T 1.4.5.14; SBN 239-40
[163] T 1.2.3.8n1;" SBN 637.

of resemblance that Hume gives.[164] However, we need not think every case of resemblance is a case of mirroring in order to accept this view of representation. In this case, if not in others, it seems a very plausible reading of the ideas that are formed by copying extended impressional arrays, that they represent by mirroring the structured content and, in virtue of this, exhibit some of the features of the impressional array including being extended or possessing duration.

I suggest we can find further support for this way of understanding representation from Hume's account of ideas of relations. Hume tells us that "complex ideas may be divided into *Relations, Modes, and Substances.*"[165] Ideas of relations, it appears, are complex ideas and we might wonder why. I take a satisfying answer to be given if we note again that Hume rejects abstraction by separation. As discussed in chapter 1 (and throughout), all ideas are particular for Hume, meaning they are all determinate in their quantities and qualities. Consider some relation, say, "to the left of." The idea of this relation cannot be an idea of "to the left of"-ness devoid of all particular content, for no ideas are like that for Hume. However, it is also a general idea of a relation that is instantiated by many different particulars and so it cannot also be merely some one particular idea. If we remember Hume's account of functionally-abstract general ideas as given in T 1.1.7. an answer suggests itself: the idea of this relation is an idea of some instance of the relation connected to other instances of the relation by association in virtue of perceived resemblance. We form this general idea by experiencing and thereby gaining ideas of various particular things standing in the "to the left of" relation to other things. Upon feeling a resemblance between these various cases, they become connected in thought so that thinking of one instance brings to mind others. By these means Hume forms general ideas without ever leaving the realm of particulars.

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[164] For a thorough discussion of some varieties of Humean resemblance see Gamboa (2007), for some criticisms of the adequacy of an account of resemblance as mirroring (in relation to impressions and ideas) see Frasca-Spada (1998) p. 18.
[165] T 1.1.4.7; SBN 13.

My idea of any given relation will be an idea of some instance of that relation related to other instances of that relation by links of association. On any given occasion of thought it will be an idea of some instance of that relation. Given this reading, we can now see why such ideas would be complex for Hume, for they would consist of (at least two) related things. What is more, they would also be ideas that seem to represent in an analogous way to the proposal above. Just as the copied idea of a spatial array would be an idea of extension in virtue of being extended, so too an idea of a relation would be an idea of that relation in virtue of contains parts so-related.[166]

If our ideas of extension are themselves literally extended (and they seem to be insofar as they too consist of spatially arranged coloured or felt parts), perhaps our complex ideas of duration equally have duration. If this is so then the approaches of the previous chapter are ruled out in virtue of not being instances of the relations they aim to represent. Instead, in order to represent temporal complexity an idea must be an instance of temporally complexity. To represent succession, an idea must itself be successive. Hume's theory of relations seems to lend support to this alternative conception on which the idea of duration itself possesses duration. For it just is an idea of two or more successively occurring moments. One unusual consequence of this view would be that, as Costa puts it, "[i]t literally takes time to have an idea of time."[167] Just as some of our ideas of extended impressions are themselves extended, so too, some of our ideas of successions are themselves successive.

On this view then, the idea of time is itself temporally complex in virtue of being successive. Although perhaps a little strange to the ears, I have argued this view can be supported by a plausible view of Humean relations given his rejection of abstraction by separation. Equally, it seems to fit with what it is to have extension and duration for Hume. Nothing bars impressions from

[166] If this view of relations is right, it seems to make the case of our idea of the causal relation rather unusual. For in that case we move beyond ideas of related pairs to an idea of the impression of reflexion these related pairs eventually trigger in us. There is not space here for a detailed exploration of this view of relations, however, for discussion of the spatial and temporal case as well as others see Costa (1998) and, for an opposing view, Hausman (1975).
[167] Costa (1990) p. 3.

forming the kind of spatial and temporal arrays that instantiate extension and duration. It seems, then, that there is no problem with these qualities being had by perceptions. But if they are had by impressional content in virtue of that content being coloured, say, and so-arranged, there seems no reason to say ideas do not also exhibit this and, to the extent that they exhibit this, it seems possible for ideas too to be extended and enduring.

5.4. Two Further Challenges

An approach such as this has some merits: the temporal complexity of the idea itself provides a means by which to avoid the circularity I discussed in chapter 4. It also seems reasonably well motivated and comes with a corresponding view of representation that, though perhaps a little unusual, seems defensible as a reading of Hume. However, the case is not yet settled. In what follows I will argue this approach faces two challenges: firstly, it seems the threatening asymmetry in our experience of time in the world has an equally threatening parallel when applied to a temporally complex idea. Specifically, if the idea itself has duration, then it must be successive. As such, at any moment of my having such a temporally complex idea, the content experienced is temporally simple. How then are these simple perceptions bound such that my idea is truly an idea of temporal complexity? If what is before my mind at every moment of having this idea is simple, what makes this an idea of succession rather than of temporal simplicity? The proponents of accounts of the sort under evaluation can, as some recognise, meet this first challenge by appeal to the principles of association. However, this means that even an account such as this which aims to limit the role of the mind must still posit certain levels of activity in forming ideas of particular times.

The second challenge arises from the apparent need of an account of this sort to take the impressional content of experience to be given as an ordering of parts or, in the case of time, an ordering of moments. In order for that to be the case it seems we need the impressional content to consist of many things, that is, it needs to be a complex of things. Though the kind

of impressional content Hume countenances does seem to be complex in his meaning of the term, it is not obviously given as *a complex*. Hume defines the complex in opposition to the simple: "Simple perceptions or impressions and ideas are such as admit of no distinction nor separation. The complex are the contrary to these, and may be distinguished into parts."[168] To say something may be distinguished into parts is not to say that it already consists of these parts, I contend that distinguishing these parts in order to turn out something which is actually a complex of parts requires additional mental activity. This again provides evidence that it is not such a straightforward task to limit the role of mental activity in the creation of these ideas.

5.4.1. Asymmetry, Circularity, and Associative Binding

Firstly then, the asymmetry between time and space rears its head again and, in so doing, threatens the return of circularity. What I will argue is that accounts of the second sort considered above, which aim for a minimal role for the mind, can only face this new challenge if they accept a much more active role for the mind, pressing us much closer to the first view considered on which the mind contributed core elements of these ideas. Whichever way we go then the mind's role is significant. The way the asymmetry returns is perhaps already clear: when I represent any particular succession in an idea, the idea I have is itself temporally complex in that it is literally a succession of temporally simple ideas. Such an idea takes time to occur and, at any moment in my thinking it the momentary perception before the mind is itself temporally simple even if it is part of a temporally complex succession. Given this, we might wonder what makes it so that the moment I am experiencing now is an idea of a moment of a succession, rather than just an idea of some simple moment. How is it that this idea is an idea of part of a more complex whole, as opposed to just a simple idea?

As in the previous asymmetry, the concern is that we will be forced to say that some interpretive spin is required in order to explain why this simple

[168] T 1.1.1.2; SBN 2.

idea is an idea of part of a succession. And yet, if that were the case then we would again be in a position of having to presuppose the application of an idea of temporal complexity to simple content in order to form an idea that itself is meant to be the origin of our idea of temporal complexity. As before, it seems we could not interpret a temporally simple thing in terms of the temporally complex prior to forming these first ideas of temporal complexity. Once again, circularity threatens. The problem here can be viewed as one of binding. In particular, how it is that that we experience the moments of the idea as bound into temporally complex sequences? Allison puts the challenge this way:

> We have already seen that we cannot regard these notes as given in a single, compound impression, which is then 'copied' by an idea, because, as successive, they do not exist *at* the same time, though they succeed each other *in* the same time. Thus, in order to form the compound idea of the five successive notes, it is necessary to bind them together in the imagination.[169]

When I have an idea of a succession of five notes, I only ever represent temporally simple things. However, I must somehow represent them as bound into a complex whole if they are to collectively represent the complex whole rather than only their simple selves. Representing a temporally simple perception as being part of a whole succession as opposed to as a complete idea in itself seems to require something more. Yet this something more had better not require that we apply concepts we are not yet in possession of.

Though certainly a challenge that needs addressing, proponents of the above account do seem capable of accounting for this binding without presupposing the idea involved, thus avoiding the related circularity. However, doing so involves recognising a core role for the mind in the formation of these ideas. In the above Allison suggested that "in order to form the compound idea of the five successive notes, it is necessary to bind them together in the imagination." This may be correct, and yet we need not imagine that this binding is the result of the application of a presupposed concept. If the Humean framework allows for binding without presupposition we might think it well capable of avoiding this second charge

[169] Allison (2008) p.55. For further discussion see also Bardon (2007).

of circularity. And Hume seems to have tools at his disposal that can play this role: the principles of association.

The principles of association create binding between ideas in a way that occurs instinctively and pre-reflectively simply in virtue of the kind of creatures that we are and our natural disposition to respond to certain kinds of stimuli in certain kinds of ways. The human mind, according to Hume, is powerfully inclined to form connections between ideas in certain conditions, our very nature "in a manner pointing out to every one those simple ideas, which are most proper to be united into a complex one."[170] This influence on thought is instinctive and mechanistic. It is presented as "a gentle force, which commonly prevails."[171] However, its pervasive power is also clear: this common influence on thought is said to be the cause, for example, of why "languages so nearly correspond to each other."[172] The qualities that provoke this associative tendency and guide our thinking afterwards are said to be resemblance, continuity in time or space, and cause and effect.

Within the bounds of the challenge above, the focus naturally falls on the role of association in virtue of perceived contiguity.[173] In introducing this Hume's discussion and examples are brief. Regarding contiguity he notes that:

> 'Tis likewise evident, that as the senses, in changing their objects, are necessitated to change them regularly, and take them as they lie contiguous to each other, the imagination must by long custom acquire the same method of thinking, and run along the parts of space and time in conceiving its objects.[174]

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[170] T 1.1.4.1; SBN 10.
[171] T 1.1.4.1; SBN 10.
[172] T 1.1.4.1; SBN 10. See also EHU 3.1; SBN 23: "Among different languages, even where we cannot suspect the least connexion or communication, it is found, that the words, expressive of ideas, the most compounded, do yet nearly correspond to each other: a certain proof that the simple ideas, comprehended in the compound ones, were bound together by some universal principle, which had an equal influence on all mankind."
[173] "Perceived" in that, like all the natural relations introduced by association, Hume does not require any objective support for their presence: that we feel some things to be contiguous, resembling, or causally related is sufficient for our connecting them in thought regardless of whether these relations truly pertain between the things so-connected. This point will receive further discussion in section 7.2.1., where I examine Hume's distinction between natural relations and philosophical ones.
[174] T 1.1.4.2; SBN 11.

And in the *Enquiry* that "the mention of one apartment in a building naturally introduces an enquiry or discourse concerning the others."[175] Equally, "[t]he thinking on any object readily transports the mind to what is contiguous."[176] Though his comments are brief, we see many examples of this association in use. Pertinent here would be that the principles of association are tied explicitly to the memory and its role in connecting and preserving the order of experienced objects: resemblance, contiguity in time or place, and cause and effect are "the principles of union or cohesion among our simple ideas, and in the imagination supply the place of that inseparable connexion, by which they are united in our memory."[177] And in the *Enquiry*: "It is evident that there is a principle of connexion between the different thoughts or ideas of the mind, and that, in their appearance to the memory or imagination, they introduce each other with a certain degree of method and regularity."[178]

We are inclined to respond to contiguous impressions by associating them, thereby connecting simples in thought. This creates connections between the component parts of complex ideas formed from them. As contiguity has its influence as much in time as it does is space, it seems very plausible to read this as suggesting that our memories of events are likely to be temporally complex and yet bound into successive sequences. The very fact that we have experienced perceptions as occurring contiguously in time, given our associative tendencies, is enough to incline us somewhat towards thinking of them later as ordered successions of perceptions. The other principles of association often play a role in uniting successions as well. In spite of the difference between moments required for the complex to be a succession, there will often be a strong degree of resemblance between contiguous moments. Equally, to the extent that successive ideas resemble prior successions judged to be causal, association in virtue of perceived causality can become involved. If all three relations hold to some degree the

[175] EHU 3.3; SNB 24.
[176] EHU 5.13; SBN 52.
[177] T 1.1.4.6; SBN 12.
[178] EHU 3.1; SBN 23.

moments of a succession might be quite tightly bound. However, the binding that results is not unbreakable. Nor is it indicative of any genuine connection in things beyond our perceptions, should there be any such things. Binding is simply the way that cognisers like us react to certain kinds of stimuli. The mind is at work then, but this binding does not require that we reflectively apply an idea of temporal complexity. It is simply a result of the way we naturally process certain kinds of information.

Hume notes that one result of the principles of association is that they connect our ideas in such a way that the mind "runs easily" from any idea to a connected one, and strong connection in thought results in a "smooth transition" from one perception to another: "The relation causes a smooth passage from the impression to the idea, and even gives a propensity to that passage."[179] Consider here his discussion of association in virtue of perceived resemblance: "'Tis plain, that in the course of our thinking, and in the constant revolution of our ideas, our imagination runs easily from one idea to any other that resembles it."[180] This easy transition is a core feature of associative relations for Hume and absolutely essential to their role in his theorising. That they induce a smooth slide between what they connect is highlighted again and again in discussion of many topics and it seems a plausible reason here why we might feel these ideas to be related or bound in the required way; that is, as parts of a succession of ideas, not merely as distinct, unconnected, elements.[181]

As this binding occurs without the need for the application of an idea of time the circularity appears to be avoided. The role of the mind also becomes much more pronounced, though not in a way that is in conflict with the Copy Principle: the mind may provide the binding, but the ordering is given. If the unadulterated impressional content is an ordering of simples then these simples stand in contiguity relations to each other and we are the kinds of creatures who are inclined to associate in these conditions.

[179] T 1.4.2.20; SBN 208.
[180] T 1.1.3.2; SBN 11
[181] For evidence that the transition is part of the very essence of a relation see T 1.3.8.3; SBN 99: "In considering the nature of relation, and that facility of transition, which is essential to it." For further discussion of this phenomenon see section 7.3.

However, next I will propose a further problem, that it is not clear that the impressional content does manifest the required features to provoke this association.

5.4.2. Contiguity and Complexity

To meet the first challenge I argued that we must posit more mental work. However, a second challenge arises at this point: in order to associate in line with perceived contiguity the impressional array needs to exhibit perceived contiguity. This seems to require that it contain elements perceived as contiguous to each other and this requires that it be presented as a complex of things. Simply put: in order to copy an ordering of objects and feel them to be ordered we require the impressional content to appear as a complex of ordered things. However, it is not clear that impressional content is of this sort. If impressional content is not given as a complex of things then it seems once again the mind is required to explain how we view it as such. If the mind is responsible for this it seems we cannot simply say, as Falkenstein in the above would like to, that we simply copy complexes. Instead, once again, the mind must be at work in order that we can forms these ideas.

It is an interesting question whether Hume did indeed think that the impressional array is given as a complex. Certainly many have taken him to be of this opinion. Falkenstein is one example:

> According to Hume's account, spatiotemporal structure is given. Impressions consist of parts that occur after and alongside one another (T 1.2.3.2–11; SBN 33–7). These spatial and temporal relations are not invented or even first discovered by the imagination (T 1.2.3.4 and 10; SBN 34 and 36–7). On the contrary, they are one of the factors that influence the imagination and determine the way it operates on subsequent occasions (T 1.3.8.5, 1.3.9.5, 1.3.13.1–2, 2.3.7–8; SBN 100, 109, 143–4, 427–38).[182]

Here Falkenstein recognises that the imagination is influenced by the relations that impressions exhibit (presumably we should think in terms of contiguity-association), but it is an interesting question whether Hume

[182] Falkenstein (2006) p.72.

consistently supports a view on which impressional content is just given as complex, and one worth considering.

Considering the case of visual extension, Hume does make comments like this: "my senses convey to me only the impressions of colour'd points, dispos'd in a certain manner."[183] Here then, the senses apparently just give us a complex of arranged points and, it seems, there is no intermediary work happening here in order to see the world in terms of this complex. It is just presented to us. However, he also says in introducing the idea of extension that "[u]pon opening my eyes, and turning them to the surrounding objects, I perceive many visible bodies; and upon shutting them again, and considering the distance betwixt these bodies, I acquire the idea of extension."[184] If by "visible bodies" he means coloured points then this conveys the same thought as the above, however, if by bodies he means the everyday objects we take to be bodies: tables, chairs, people, etc., then it is far from obvious these are just presented to us. In fact, Hume goes to lengths to explain that thinking in terms of these kinds of bodies is the result of imaginative work. Seeing the world in terms of every day bodies is the result of experience and custom, of taking coloured patches to represent things in the world with different persistence conditions and which are variously related to each other and to ourselves. This is an act of judgement resulting from both experience and instinct and all the less recognisable for its familiarity. It is not something just presented in impressional content. Consider his comments regarding three-dimensional distance:

> 'Tis commonly allow'd by philosophers, that all bodies, which discover themselves to the eye, appear as if painted on a plain surface, and that their different degrees of remoteness from ourselves are discover'd more by reason than by the senses. When I hold up my hand before me, and spread my fingers, they are separated as perfectly by the blue colour of the firmament, as they cou'd be by any visible object, which I cou'd place betwixt them.[185]

And

[183] T 1.2.3.4; SBN 34.
[184] T 1.2.3.2; SBN 33
[185] T 1.2.5.8; SBN 56.

> 'Tis universally allow'd by the writers on optics, that the eye at all times sees an equal number of physical points, and that a man on the top of a mountain has no larger an image presented to his senses, that when he is cooped up in the narrowest court or chamber. 'Tis only by experience that he infers the greatness of the object from some peculiar qualities of the image; and this inference of the judgment he confounds with sensation, as is common on other occasions.[186]

Here, the mind is at work. It is just that the "judgments" it provides are so naturally to us by the time we reflect on them that we take them to instead be sensation. When Hume tells us we just open our eyes and see bodies it seems (if we read "bodies" in this more developed sense) that he is not being entirely truthful to the picture he goes on to endorse. He may be intending to start the discussion of extension from a more intuitive position, perhaps to emphasise that our reaching this conclusion requires work. Custom and association are so well entrenched in our way of experiencing the world that it takes effort and concentration to think about the raw material. We confuse judgement with sensation and take ourselves to be merely sensing things which we, in fact, would not had we not already brought imaginative work to the table. Hume tells us that visual experience presents us with a flat screen of coloured patches. Equally, though this screen may, in fact, be composed of innumerable coloured points, our experience does not seem to just give us these either. Isolating the points in visual experience, if we can do it at all, takes effort. What impressional content offers is a visual screen that exhibits difference, it does not seem to give us a complex of things.

Here I suggest we focus on the difference between a thing's being *complex*, and a thing's being *a complex*. As noted above, Hume's definition of complexity does not entail that complex things are presented to us as complexes of things. To remind: "Simple perceptions or impressions and ideas are such as admit of no distinction nor separation. The complex are the contrary to these, and may be distinguished into parts."[187] The impressional content we receive does seem to be complex, for it is certainly such that we find ourselves capable, indeed naturally inclined, to distinguish

[186] T 1.3.9.11; SBN 112.
[187] T 1.1.1.2; SBN 2.

parts within it. However, to say that a thing is complex is not to say that it is presented to us as a complex of many things, it is only to say that, with experience and through additional work activity, we can come to see it as many things. To distinguish something into parts takes experience and imaginative work.[188] When looking for what kind of work we might look again to the so-called Separability Principle:

> [W]hatever objects are different are distinguishable, and that whatever objects are distinguishable are separable by the thought and imagination. And we may here add, that these propositions are equally true in the inverse, and that whatever objects are separable are also distinguishable, and that whatever objects are distinguishable are also different. For how is it possible we can separate what is not distinguishable, or distinguish what is not different?[189]

A complex impressional array contains the difference required that we come to view it as a complex. However, to say that something is separable "by the thought and imagination" is again to posit additional work on the part of the perceiver.

In order to perceive the impressional array in the way required for it to exhibit contiguity we require it to be presented as a complex of things, rather than merely as a complex thing. But if we look at how Hume in his more careful moments describes the impressional array it appears to be a complex thing, but not necessarily a complex of things. Coming to see a complex array as a complex of things again requires mental work. Once again, it seems that the mind must be significantly involved in the formation of these ideas of particular times.

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[188] As a point of note, what I say here is not at odds with the Malezieu argument Hume offers in T 1.2.2. which I discussed in chapter 3. On its strongest reading the Malezieu argument tells us that anything complex is really many things. However, even if this is so, this does not entail that we perceive it as many things without additional mental work. As mentioned above, it may be that the visual field is composed of innumerable coloured points, this does not entail that we can isolate these points without effort.
[189] T 1.2.7.3; SBN 18.

5.5. Conclusion

I have argued that accounting for how we form ideas of particular times requires significant work on the part of the mind, regardless of which route we adopt. If we interpret the Copy Principle in the way that Frasca-Spada does then this mental work is contributed early in the game: being capable only of tracing the simple elements, we must conclude that the ordering these simples occur in is, in some way, a product of the mind.

Some have sought to avoid this kind of consequence by extending the Copy Principle to the copying of complexes. Interpreting the principle in this broader way, Falkenstein and others argue that the ordering is simply copied: experience presents us with complexes and we form complex ideas from them. I have offered two challenges to this position: Firstly, in order to address the reoccurring asymmetry concern, it is necessary for proponents of this route to appeal to a degree of mental activity in order that these complex ideas be formed as complex ideas. Copying the complex is not enough if you do not also contribute the work required to bind it into a complex. Even if the ordering is given in impressional content then, one must do work to create ideas of particular times and spaces from it. Secondly, I challenged the idea that ordering was given in impressional content. If impressions are not in fact presented as ordered, but rather the work needed in order to explain how they come to be seen as such is contributed by us, then again the mind must come into play and, indeed, in quite a marked manner.

It seems we can account for the formation of ideas of particular times and we can do this whilst avoiding the charges of circularity that arose time after time in chapter 4. We can form ideas of particular times without presupposing a prior idea of time, however, we cannot explain their formation without elevating the influence of the mind: there is no avoiding a significant role for the mind in the creation of these ideas then. Equally, whether the Copy Principle must bend or break, it seems these ideas sit in an unusual position. The adaptions that seem required to shore up the second line of approach do not involve appealing to anything which is not already

available on the Humean system; an active mind compelled by associative tendencies seems to have the capacity to form these ideas from the impressional content given. Nevertheless, these ideas of time are hardly copied in any straightforward manner and contain absolutely integral elements which can be traced to the mind's role, rather than to experience. In the next two chapters I will consider the next step of the process of forming the idea of time, which takes us from ideas of particular times to an idea of time in general. Once again we will see that the role of the mind and the principles of association is significant.

6. Forming the General Idea of Time: the Challenge of Resemblance

6.1. Introduction

In the previous chapter I argued that is it possible to account for the formation of ideas of particular times within Hume's account without circularity. However, it is not possible to account for these without countenancing a marked role for the mind. For even these first ideas of particular times the mind's influence is great. The idea of time in its fullest form though is not merely a particular, temporally complex idea. Instead it is an idea of the "manner of appearance" that temporally complex ideas share: their successiveness. This successive structure is manifest in not one, but many particular ideas; it is an idea of successiveness in general.

As has already been noted, Hume rejects abstraction by separation when it comes to accounting for general ideas. Instead, he characterises general ideas in a way that is broadly in line with Berkeley's treatment. On any occasion of thought, a general idea is instantiated by thinking of a fully particular idea. However, because of the associative connections between this and other particular ideas, one idea is capable of standing for many and calling other resembling ideas to mind when required. The availability of the selection of particulars allows the thinker the same flexibility with the ideas as an abstract idea aims to, but with none of the indeterminacy of content. By these means Hume forges functionally-abstract general ideas using particular ideas and the connecting principles of association. Through these patterns of associated particulars we find ourselves able to think about an aspect of our ideas that cannot be conceived alone: their successiveness. The idea of time in its fullest form, then, is not copied from any particular idea. Instead its origin is in the resemblances that different sets of temporally complex ideas bear to each other.

For Hume then, forming an idea of time relies on our capacity to associate as resembling in their successiveness a number of otherwise diverse

particular ideas. As discussed in the previous chapter, Hume tells us we can derive the idea of time from perceptions of all kinds, that is, both impressions and ideas, from the succession of impressions of all sense modalities and indeed of reflexion, and from ideas of any and all sorts.[190] So, the sound of five notes played on a flute, but also the feel of running my fingers across tree bark, the succession of emerging flavours in a sip of wine, the thoughts running through one's head, etc.: for Hume, all of these experiences are temporally complex, and our ideas of them all resemble each other in that respect. In many ways then, the particular ideas that forge this general idea are extremely different. From this fact a fundamental challenge arises as to how it is we come to see as similar in this one respect experiences which are, in other respects, so different. In the final part of this work I will explore the difficulties raised by this need to find a resemblance among such disparate things. I will argue that two core problems emerge:

Firstly, it is problematic that the resemblances between the different realising ideas are highly elusive. In the case of time it is a very broad structural resemblance that underlies the association, but this is potentially obscured by all the *prima facie* differences between these experiences. In light of this apparent elusiveness, the charge is made that, only if I already knew something of what it was to be successive, could I possibly come to see such different ideas as resembling each other. However, to know what successiveness is and how it can be realised, is to know the key feature of the idea of time and to know that, it seems, just is to have an idea of time.[191]

To this first challenge I will suggest a further element of difficulty arises: that (with the possible exception of the idea of existence) seems particular to the case of time.[192] The concern is that noting resemblances is made easier when

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[190] T 1.2.3.6; SBN 34-5.

[191] Discussion of this challenge for general ideas occurs in many places: see Broughton (2000) and Wilson (1998) for two good examples. For this problem being directly applied to the ideas of time and space see Allison (2008) chapter 2.

[192] The idea of existence seems another instance of an idea which has no contrast class. Hume tells us that to conceive of any thing is to conceive of it as existing: "[t]here is no impression nor idea of any kind, of which we have any consciousness or memory, that is not conceiv'd as existent" (T 1.2.6.2; SBN 66), and "[t]he idea of existence, then, is the very same with the idea of what we conceive to be existent. To reflect on any thing simply, and to reflect on it as existent, are nothing different from each other." (T 1.2.6.4; SBN 66-7).

we have at hand a contrast class, that is, a class of things which are not-F and so can stand apart from the resemblance class of things which are F. It is plausible to think that experiencing things which do not possess the relevant feature might enable one to more easily note the resemblance that exists between the ideas that possess the relevant positive features, not least because Hume notes that properties which become common to too many particulars lose their capacity to provoke resemblance-association.[193]

In the case of the idea of space, for example, a contrast class is available: Hume tells us that our visual and tactile perceptions resemble one another in that they appear arrayed in space. Contrasted with this are the perceptions of other senses and of our internal sense which are not spatial and do not give us the idea of space (though we sometimes come to think of them as being spatially located in virtue of their constant conjunction with things which we understand to be. For example, when I come to think of the taste of the apple as located in the apple). However, in the case of time, all our perceptions make their appearance to us in succession and experience at every moment is changing. Strictly speaking, it looks like the contrast class that could help us form an idea of time is absent.

The second problem is that Hume's idea of time is an idea of a cross-modal resemblance which holds between ideas of different sense modalities. Hume tells us that the resemblances we find between different particular ideas can be carried beyond the ideas of one sense to others. In the case of space, the resemblance holds between the spatial and the visual. In the case of time, the resemblance extends over ideas of all sense-modalities and ideas of reflexion too. If we think of resemblance as requiring anything like qualitative similarity in terms of content it becomes extremely difficult to say how there could possibly be a resemblance that embraces all these cases. In suggesting

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Distinctions of reason won't help us either: "Our foregoing reasoning [T.1.1.7.] concerning the *distinction* of ideas without any real *difference* will not here serve us in any stead. That kind of distinction is founded on the different resemblances, which the same simple idea may have to several different ideas. But no object can be presented resembling some object with respect to its existence, and different from others in the same particular; since every object, that is presented, must necessarily be existent." (T 1.2.6.6; SBN 67)

[193] "When a quality becomes very general, and is common to a great many individuals, it leads not the mind directly to any one of them; but by presenting at once too great a choice, does thereby prevent the imagination from fixing on any single object." T 1.1.5.3; SBN 14

that the resemblance of the spatial extends over both visual and tangible ideas, Hume departs from Berkeley and presents himself a substantial challenge in accounting for this.[194] Being that much more variously instantiated, we might think the case of time is at least as bad as that of space, if not worse.

In this chapter I will first set out these challenges in more depth. They are both interpretive and critical: they ask us deep questions about how Hume's account functions and what it relies on, but also provide challenges that cut to the heart of the its adequacy. Although it has certainly been challenged in many ways, there are further difficulties that emerge here: I suggest the problem of the absent contrast class is one. However, this is not to say that positive things cannot be said in relation to these problems. In this chapter I will focus on the issue of a contrast class and suggest it is possible to address this particular difficulty and thereby remove one of the barriers to forming this idea. In the next chapter, I will look much deeper into Humean resemblance and what kinds of resemblances seem capable of provoking association in creatures like us. The examples Hume offers of resemblance are varied and yet, for all the roles resemblance plays, somewhat under-explored: he provides hints and clues and examples but it is up to us to draw out the details. In both this chapter and the next we will see that, by focusing on the idea of time and the particular challenges it presents, we are again offered the opportunity to look deeper into the workings of Humean cognition more generally and to shed light on the principles of association, and the status of general ideas. What emerges is, just as in the previous two chapters, a picture on which the activity of the mind simply cannot be overstated.

6.2. Forming the General Idea: Abstraction, Separability, and Distinctions of Reason

From particular ideas we come to form a general idea grounded in the resemblances these particular ideas bear to each other. In this case the

[194] For discussion see Allison (2008) chapter 2 and Waxman (1996).

resemblance is in virtue of their perceived successiveness. Before I lay the problems more fully on the table it is worth looking in more depth at how Hume presents the process of forming general ideas.

Broadly, Hume follows Berkeley in rejecting abstract ideas construed as ideas which are indeterminate between the particular features of the things they represent. These ideas, he thinks, are literally inconceivable for, when we strip away all the particularities of an idea, we lose the idea itself. Instead all ideas are particular and fully determinate. However, particular, determinate ideas can, through patterns of association which in this case are wrought by resemblance, come to represent a number of other relevantly similar particular ideas. This is how we arrive at the functional equivalents of abstract ideas from within a system that excludes genuinely abstract ideas. Notably the process becomes smoothed out by language and by habit:

> When we have found a resemblance among several objects, that often occur to us, we apply the same name to all of them, whatever differences we may observe in the degrees of their quantity and quality, and whatever other differences may appear among them. After we have acquired a custom of this kind, the hearing of that name revives the idea of one of these objects, and makes the imagination conceive it with all its particular circumstances and proportions. But as the same word is suppos'd to have been frequently applied to other individuals, that are different in many respects from that idea, which is immediately present to the mind; the word not being able to revive the idea of all these individuals, only touches the soul, if I may be allow'd so to speak, and revives that custom, which we have acquir'd by surveying them.[195]

First we come to feel a resemblance between several things and so they become connected in thought. Then we tag the collection of associated items with a word which allows for easier and more systematic recall. Once the practice of using the word linked to its connected ideas becomes habitual we no longer explicitly recall the related ideas, instead, the custom of word-use itself allows us to think and speak well enough even without fully considering all associated ideas:

[195] T 1.1.7.7; SBN 20.

> I believe every one, who examines the situation of his mind in reasoning, will agree with me, that we do not annex distinct and compleat ideas to every term we make use of, and that in talking of government, church, negotiation, conquest, we seldom spread out in our minds all the simple ideas, of which these complex ones are compos'd. 'Tis however observable, that notwithstanding this imperfection we may avoid talking nonsense on these subjects, and may perceive any repugnance among the ideas, as well as if we had a full comprehension of them.[196]

Our idea of time is essentially formed in this way. As outlined in chapter 4, Hume's presentation focuses on forming the idea of extension, then develops the parallel for the case of time. To remind the reader, this second step of the argument proceeds as follows:

> i. [F]inding a resemblance in the disposition of colour'd points, of which they are compos'd, we omit the peculiarities of colour, as far as possible, and found an abstract idea merely on that disposition of points, or manner of appearance, in which they agree. (T 1.2.3.5; SBN 34)

And this resemblance we find appears to extend beyond the objects of sight to include also the objects of touch:

> ii. Nay even when the resemblance is carry'd beyond the objects of one sense, and the impressions of touch are found to be similar to those of sight in the disposition of their parts; this does not hinder the abstract idea from representing both, upon account of their resemblance. (T 1.2.3.5; SBN 34)
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> iii. [Thus] [a]ll abstract ideas are really nothing but particular ones, consider'd in a certain light; but being annexed to general terms, they are able to represent a vast variety, and to comprehend objects, which, as they are alike in some particulars, are in others vastly wide of each other. (T 1.2.3.5; SBN 34)

To finish, we are given the story for the case of the idea of time. In spite of being a more "abstract" idea, since it is derived from, and instantiated by, a greater variety of sources, the formation process for it is presented as analogous to that of the idea of space:

> iv. The idea of time, being deriv'd from the succession of our perceptions of every kind, ideas as well as impressions, and impressions of reflection as

[196] T 1.1.7.14; SBN 23

> well as of sensation, will afford us an instance of an abstract idea, which comprehends a still greater variety than that of space, and yet is represented in the fancy by some particular individual idea of a determinate quantity and quality. (T 1.2.3.6; SBN 34-5)

Association in virtue of perceived resemblance is the trigger factor for forming this idea, and seeing the resemblance these different particular instances bear to each other is what allows us to focus not on the respects in which they differ, but on the respect in which they resemble each other. Notably, this resemblance carries across ideas of different sense modalities. Just as Hume says we find a resemblance between the extensions of sight and of touch, so too do we find a resemblance between successive experiences of all sense modalities. In encompassing these even more disparate experiences, the idea of time relies on a resemblance that cuts across a great deal of very different ideas. In any act of thought it will be represented by some particular idea: however, by relations of association in virtue of perceived resemblance, it will be capable of representing a huge variety of otherwise different ideas.

Before I turn to the challenges a theory of this sort presents, I briefly want to consider one concern that might be had at this point. This is the worry that the idea of time that emerges is at odds with Hume's commitments regarding distinction and separability. Showing how this concern is misplaced will be helpful in clarifying Hume's position here.

Consider again Hume's Separability Principle: "Every thing, that is different, is distinguishable; and every thing, that is distinguishable, may be separated."[197] Hume employs this principle on several occasions and it does plenty of theoretical work for him. However, immediately after this statement of it he goes on to say that: "The idea of time is not deriv'd from a particular impression mix'd up with others, and plainly distinguishable from them; but arises altogether from the manner, in which impressions appear to the mind, without making one of the number."[198] The idea of time (as

[197] T 1.2.3.10; SBN 36. For more discussion of the Separability Principle see Garrett (1997) chapter 3.
[198] T 1.2.3.10; SBN 36.

opposed to the idea of *this* or *that* time) is not the same as the succession of perceptions which on any occasion instantiate it, nor is it the same as any succession of perceptions: it is a different idea from all successions of perceptions in that it is the idea of their very successiveness.

In spite of being a different idea, then, it is inseparable from successions of perceptions for it cannot be realised without them. In spite of being different then, it is not separable. Instead, Hume tells us that the idea of time is not only derived from successions of perceptions: it is inconceivable without conceiving a succession of perceptions:

> The ideas of some objects it certainly must have, nor is it possible for it without these ideas ever to arrive at any conception of time; which since it appears not as any primary distinct impression, can plainly be nothing but different ideas, or impressions, or objects dispos'd in a certain manner, that is, succeeding each other.[199]

Hume addresses this difficulty by appealing to a "distinction of reason," wherein we draw a distinction in thought between things which cannot in fact be conceived separately. Hume places his discussion of distinctions of reason immediately after his account of abstract ideas and immediately before his account of the ideas of time and space. The location of this discussion is telling for it illuminates both passages. The example used as illustration is the seemingly problematic distinction we are capable of drawing between "figure and the body figur'd; motion and the body mov'd."[200] In both cases (and as with the idea of time), we appear to have distinct ideas of elements that nevertheless cannot be conceived separately. Some have taken his acceptance of distinctions of reason to be problematic and fundamentally at odds with the Separability Principle he stated mere paragraphs before. Kemp-Smith, for example, comments that Hume is "quite evidently allowing, under a new title [distinctions of reason], what he has seemed to deny in the earlier parts of the section."[201]

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[199] T 1.2.3.10; SBN 37.
[200] T 1.1.7.17; SBN 24.
[201] Kemp-Smith (1941) p.266.

However, there is no need to see distinctions of reason as in conflict with the Separability Principle and what resolves the tension is association by resemblance. On this score, I side with Garrett in suggesting that these distinctions can be accommodated happily into Hume's account so long as we take care. To show why Hume does not in fact contradict himself here, we need to return to his discussion of abstract ideas and resemblance and it is to this Hume refers us when he attempts to explain away the face-value unacceptability of distinctions of reason:

> 'Tis certain that the mind wou'd never have dream'd of distinguishing a figure from the body figur'd, as being in reality neither distinguishable, nor different, nor separable; did it not observe, that even in this simplicity there might be contain'd many different resemblances and relations.[202]

He explains himself through an example: consider a first experience of a coloured globe. In this case one of white marble. What we experience is a white shape, and at this point the colour and the shape are one for us. However, say I then experience a white cube and later a black globe. I notice that the cube resembles the globe in respect of its colour and yet it also resembles the black globe in respect of its shape. In noting these resemblances, I come to form ideas of "globe" and "white." In forming these ideas I become capable of forming a distinction of reason between the globe's shape and its colour. This does not, however, involve forming separate ideas of the shape apart from its colour or the colour apart from the shape. Instead, "we consider the figure and colour together, since they are in effect the same and undistinguishable; but still view them in different aspects, according to the resemblances, of which they are susceptible."[203] When I consider the shape of the white globe it makes me think of the black globe; when I consider the colour of the white globe it makes me think of the white cube. Through these associations and resemblances, I am able to think of one thing under different aspects without thereby implying a real distinction among these elements, or the possibility of their separate existence.

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[202] T 1.1.7.18; SBN 25.
[203] T 1.1.7.18; SBN 25.

Applied to the case of time, I am able, by noting the similarities between the five successive notes and the succession of flavours in a sip of wine, to think about succession in general as something which is different from any particular set of successive perceptions even though it is impossible for me to conceive any idea of succession without thereby conceiving some set of successive perceptions. As Garrett highlights in his dismissal of this seeming objection, it is not a question of separation, but of conceiving different aspects by noting different resemblances:

> The distinctions of reason that appear to be exceptions to the Separability Principle thus prove to involve aspects of resemblance…to speak of distinguishing such "aspects" or "resemblances" is merely a way of referring to the genuine distinction we find between the many different – but also distinguishable and separable – *classes* of perceptions that resemble the perceptions under discussion. Hume is thus able to maintain his Separability Principle without exception for all *objects*, including all perceptions, and it is for this reason that he regards his account of distinctions of reasons as vindicating rather than undermining, that principle.[204]

In sum then, the idea of time is the idea of a successive manner of appearance. Since this idea cannot be conceived without forming a determinate idea of some particular set of successive perceptions, any instance of our thinking about time will be a thought of a particular succession. However, because we perceive different particular successions to resemble, we associate them in thought, thus forming a general idea which, though always entirely particular in its features, has the capacity to represent a number of different particular successions through its associative ties. This is how time provides an instance of a distinction of reason: we draw a distinction between the various parts of a complex experience and the order of arrangement of those parts. Through these patterns of associated particulars we find ourselves able to think about a quality that cannot be conceived alone. The idea of time, then, is derived from our perceptions. However, it is not traceable to any particular simple perception, nor any particular complex perception. Instead its origin is in the resemblances that hold between sets of complex perceptions.

[204] Garrett (1997) p.64.

6.3. The Challenges: Elusive Resemblances and Cross-Modal Association

From Hume's account of this process we can see that association in virtue of perceived resemblance plays a pivotal role. According to Hume, we are susceptible to finding resemblances between complex particulars of the same sense modality, and even between those of different sense modalities. We are capable of doing this in spite of the fact that the resemblances are structural, and obscured by their many other differences.

As outlined above, there are two key challenges I will forward here: First, the resemblances between particulars are highly elusive, and this makes it unclear how we come to note the positive inclusion criteria for the idea of time. That is to say, how do we come to see two different temporally complex particular ideas as resembling one another in respect of their successiveness? As I will discuss, this problem has certainly been noted in the literature. To this challenge I add a further level of difficulty: strictly speaking, we seem to lack a contrast class in the case of successive perceptions.

The second challenge arises from the fact that the resemblance is presented as holding across different sense modalities, this further complicates the picture. Specifically, it seems to imply that Hume employs a much broader sense of resemblance than we might have thought. I will leave fuller explication and analysis of this problem to the next chapter, where the phenomenon of resemblance will get a deeper look. Collectively, the challenges Hume faces here have inclined some commentators to conclude that the process of forming this general idea of time is simply unachievable from within his framework. It is suggested that, unless we already had some idea of what the key features of temporally complex ideas were, we would not be able to see the requisite resemblances involved in forming the idea of time. However, if we already had an idea of the features we are looking, it seems, we already have an idea of succession. If this were the case, we would be required to presuppose the very idea we are seeking. Once again, circularity threatens.

A final point before I begin: there is an artificiality to these cases which needs to be addressed in order that the depth of the difficulty they present be appreciable. Although Hume explains general ideas through resemblance-association, it is not inconsistent with this that we in fact learn most of our ideas through being taught them. We have examples pointed out to us by people who already possess the ideas, and are practiced in picking out the relevant features of the things under consideration. Then, by trial and error, we learn to correctly pick out the cases for ourselves. Perhaps then, for any given person, the idea of time is not likely to have actually been developed in the way Hume suggests. However, this does not resolve the difficulties Hume faces. He aims to account for the origin of these ideas within the framework of their broad derivation from experience. This does not require that we actually do derive each general idea in this particular way, but Hume requires that it be possible for us to do so. And in order to explain how it is possible for us to do so, his account needs to be explanatorily adequate in providing a plausible story of how this may be done in the face of these challenges. Even if, in any particular case, we do not in fact do all the work ourselves, so to speak, if these ideas are grounded empirically, it needs to be possible that they could be derived empirically. Some of the examples used to illustrate the cases I will discuss, then, are toy examples. In spite of this though, the problems they pose to the adequacy of Hume's epistemology are very real.

6.3.1. The Problem of Positive Inclusion

To illustrate problem of how we notice positive inclusion criteria before we have an idea of the respect in which two particulars resemble each other, consider Wilson's example (given in her critique of Hume's theory of general ideas) of forming the general idea of "dog."[205] According to Hume, in order to form this general idea, I need to encounter particular dogs and come to see a resemblance between them. This resemblance results in my associating these particular ideas and, in so doing, forming an idea of dog that is

[205] Wilson (1998) pp.136-7.

indifferent to variation in a number of other features including colour, shape, size, location, disposition, eating habits, smell, and the rest. The problem is this: why think that I would, if I didn't already know that the idea of a dog includes such variation, see the similarities between, say, a German shepherd and a Chihuahua in order to form an idea of doghood that represented them both? One might think I wouldn't.

Wilson makes the charge that only if I already knew that dogs were the sorts of things that allowed for these particular kinds of variation (though not others) could I recognise the relevant similarities and associate them together, thereby forming an idea that took each dog as representative. So only by knowing in advance that some characteristics were more important than others could I know what to rule out and what to attend to. However, knowing which characteristics are at the core of the idea of a dog seems to involve already having a somewhat developed understanding of the sorts of things that dogs are. Indeed, one might think that knowing the key features of dogs in such a way that you can sort cases into dogs and non-dogs amounts to already possessing the idea of "dog". So one might worry that Hume's account presupposes the very idea it is seeking to explain. This circularity is taken by many to indicate a fundamental shortcoming in his approach. Here, Allison and Broughton make essentially this charge:

> Not only does Hume assume that the mind can recognize resemblances among its distinct impressions (even though there is no such thing as an impression of resemblance), but also that it can pick out those that are relevant and disregard irrelevant differences, without already having the concept or general idea in question.[206]
>
> On a very natural understanding of Hume's aim, this account of general terms will be defective, for it will appeal to the very ability it is supposed to explain. In order for my imagination to be readied to call up ideas of various tables, I need first to have noticed the respect in which the various tables resemble one another (and for that matter the respect in which the various utterances of "table" resemble one another). It is only when I have noticed these resemblances that my experience can work upon my imagination and prod it into forming the custom or habit that links one particular idea to the many particular ideas in the "collection, which [the mind] intends to express by the general term" (T 22). But then it seems that Hume's explanation must

[206] Allison (2008) p. 33.

> be circular: how can someone notice that one thing resembles another in respect of tablehood unless he already has the general idea of table?[207]

Broughton's point which highlights the role of language is key. Although words definitely seem to play an important role in allowing us to think with general ideas (by working as tags for the various resemblance classes and thereby aiding smooth, efficient recall), they cannot be what allows us to form these classes. Assigning a word to a class of ideas could allow us to think certain ideas more easily. However, it is important to note that the application of a term here cannot help us address this particular problem because, in order to help us think of a quality, a term must be attached to an idea or group of ideas. The grouping must already have occurred, only then can the term allow us easier access to, and manipulation of, these ideas. Ultimately, words seem to come in too late to aid us in addressing this difficulty.

6.3.2. The Problem of the Absent Contrast Class

To compound this problem we can, I suggest, find an additional challenge in the case of time. Consider: although different dogs can be very different, they mostly resemble each other in more ways than say, they resemble tables. Though dogs might be quite dissimilar, I also have access to a range of things which do not resemble dogs. These encounters with the non-resembling provide a contrast class. Such a contrast class also exists for the idea of space, for Hume tells us that only some of our experiences are spatial. Specifically, visual and tactile experiences are spatial, whereas impressions of reflexion, tastes, smells, sounds, and ideas of these, are not. In the case of space then, though our ideas of visual and tactile extensions may not be obviously alike in many ways, but, at least in theory, they resemble each other in this respect more than they resemble the ideas of other sense-modalities. These other experiences provide a kind of contrast class in virtue of this. However, for Hume, all successive perceptions of all sorts occur in time and the idea of time is "deriv'd from the succession of our perceptions of every kind, ideas as well as impressions, and impressions

[207] Broughton (2000) p.282.

of reflection as well as of sensation."[208] If this is the case for all perceptions, what kinds of experience could provide a contrast class? Two sorts of experience offer themselves up: (i) experiences of the temporally simple, that is, experiences of moments. (ii) Experiences which remain unchanging through time. At first blush, both look inappropriate, though for different reasons.

So to the first possible source of a contrast class: that of the experience of moments. In chapters 2 and 3 I argued the moments of time were temporally simple, and so not successive. However, these moments were always, it seems, far briefer than our perception allowed for, this was one of the ways in which the world simply outran our capacities to perceive it. In this sense, I suggested that the moments of the world, should there be such, came apart from the moments of our experience. In seeking an experience of the temporally simple we might wonder whether the moments of experience could provide this, even if the ultimate parts or moments of time itself are epistemically inaccessible.

Just as Hume seems committed to a single present moment of time, it seems he would be correspondingly committed to a single present moment of experience. In his discussion of moments, Hume makes two things clear about them: they cannot coexist, and they are temporally simple. Conceptually, they stand in opposition to successions and the temporally complex. If the moments of experience equally earn the name moments, we might think these qualities must carry over to them as well (though I will, in the next section, discuss a view on which the first criterion is denied). If we think that a moment of experience in a way analogous to the moments of time I argued for in chapters 2 and 3, we might think of them as collections of coexisting things. In the case of time, they were collections of things in the world, in the case of experience, we might think of them as collections of coexisting perceptions: that is, all the perceptions had by some perceiver at a time. If we think of them in this way, however, a contingent, yet problematic difficulty emerges regarding the availability in experience of

[208] T 1.2.3.6; SBN 34-5.

these moments: The constant movement and change in our perceptions seems to make experience near constantly successive in a way that makes simple experiential moments a troublingly inaccessible contrast class.

First, let's consider this is a little more depth. I will begin by taking our experience to be, in Hume's words, "the universe of the imagination," that is, all impressions and all ideas that we have.[209] If we understand experience in this way, it seems any moment of my experience will be the sum total of all perceptions, both impressions and ideas, that I am having at that time. From what Hume tells us, we have reason to suppose that experience conceived in this way is in a near constant state of flux. This is true even if it is composed of innumerable temporally simple (so not successive) moments. Keeping in mind that any change in any perceptions, be they impression or ideas, introduces succession into my experience, consider the following:

> For we may observe, that there is a continual succession of perceptions in our mind.[210]
>
> One thought chaces another, and draws after it a third, by which it is expell'd in its turn. In this respect, I cannot compare the soul more properly to any thing than to a republic or commonwealth, in which the several members are united by the reciprocal ties of government and subordination, and give rise to other persons, who propagate the same republic in the incessant changes of its parts.[211]
>
> But setting aside some metaphysicians of this kind, I may venture to affirm of the rest of mankind, that they are nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement. Our eyes cannot turn in their sockets without varying our perceptions. Our thought is still more variable than our sight; and all our other senses and faculties contribute to

[209] "Now since nothing is ever present to the mind but perceptions, and since all ideas are deriv'd from something antecedently present to the mind; it follows, that 'tis impossible for us so much as to conceive or form an idea of any thing specifically different from ideas and impressions. Let us fix our attention out of ourselves as much as possible: Let us chace our imagination to the heavens, or to the utmost limits of the universe; we never really advance a step beyond ourselves, nor can conceive any kind of existence, but those perceptions, which have appear'd in that narrow compass. This is the universe of the imagination, nor have we any idea but what is there produc'd." T 1.2.6.8; SBN 67-8.
[210] T 1.2.5.29; SBN 65.
[211] T 1.4.6.19; SBN 261.

> this change; nor is there any single power of the soul, which remains unalterably the same, perhaps for one moment.[212]

"Continual succession", "incessant changes", a "perpetual flux" moving with "inconceivable rapidity". As our experience includes the constantly flowing thoughts in our mind and the rapidly changing impressions from our internal and external senses, we have every reason to suppose that each moment will be so minute a section of this experience that it is, in effect, unnoticeable. Our experience is rarely, if indeed ever, unchanging. And, if every change introduces a new moment in the experiential succession, it seems they will pass by extremely rapidly. From this, although unchanging moments provide the bedrock of this experience, from our perspective, the whole is a changing, flowing succession of perceptions. On this reading of experience, the contrast class that moments offer to provide is contingently (but no less problematically for that), unavailable.

In the next section I will consider an alternative view of moments that offers to avoid this problem, first though, there is an interesting line of objection to this that it is worth considering at this point. That is to argue that, though moments are themselves not noticeable in our experience, they are inferable from the very nature of the succession; the two concepts are just two sides of one coin. Thinking of an experience as constantly successive seems to require we think of it as a succession, and thinking of it as a succession, for Hume, requires that we think of it as a succession of moments. Conceptually, it seems that conceiving of a succession requires thinking in terms of simple moments: could this not ensure that the non-successive is cognitively available even if it is not an overt feature of our experience? All successive experiences involve a succession of moments, and so we always have a contrast class available if we just think about what being successive means for Hume. We need only contrast the whole with its parts.

However, although the simple is inextricably linked to the complex for Hume, I do not think this can help us with the problem at hand. For a contrast class to be of use to us, it needs to be a feature of our experience

[212] T 1.4.6.4; SBN 252-3.

we can notice. For these simple moments to help then, they need to be experientially available. Yet, at this rudimentary first stage of idea-formation, conceptually hefty links between ideas do not seem to be something we are in a position to appreciate. Ontologically, and perhaps even conceptually, moments stand in contrast to successions. However, in the act of forming the very idea of time, these facts do not seem to be available to us, and so they offer no help with the problem at hand. We need a contrast class which is notable. Something which can be felt as obviously in opposition to succession and encourage us to form this first idea of what it is to be successive. Conceptual truths and underlying ontology seem of no use in this.

So to the viability of the second candidate experience: an experience which is unchanging through time. We might think that, just as we form ideas of particular successions we can form ideas of particular unchanging things. This seems a straightforward solution, and yet explaining how we might have ideas of such things is challenging from within Hume's discussion. However, it is a consideration worth dwelling upon because it is a topic Hume devotes some discussion to, and which raises some interesting questions. On the one hand, we might think that an idea of an unchanging object which persists through time could be ruled out in a straightforward manner: to be temporally complex is to be successive, and so the idea of time without change has a kind of conceptual incoherence for Hume. The idea of time is an idea of succession, of change; so to think of a thing unchanging through time is to think of something changing and not changing. Hume tells us this idea of an unchanging duration is indeed a fiction.[213] On these grounds there seems to be no contrast class to be found here.

In fact though, Hume's discussion of this kind of case is rather more subtle and interesting. He appears to countenance something of this sort in his discussion of so-called "stedfast objects," that is, objects which remain unchanged through time, though what to conclude from his discussion is

[213] For more on the idea of an unchanging duration as a fiction see Baxter (2008) chapter 2 (which will receive much discussion below), McRae (1980) p. 120, and Traiger (1987).

somewhat contentious. Since they offer the possibility of a contrast class, they are well worth investigating here.

6.4. Steadfast Objects

Hume discusses "stedfast objects" in three places in the *Treatise*: T 1.2.3.11; SBN 37, T 1.2.5.29; SBN 65, and T 1.4.2.29 SBN 200-1. According to Hume, a steadfast object is an object which is "stedfast and unchangeable," and which stands in contrast to being "a succession of changeable objects."[214] Steadfast objects are unchanging and yet are presented as coexisting with successions. Being unchangeable, and so not successive, steadfast objects, considered alone, have no duration. However, they coexist with successions, which would seemingly bestow duration upon them; wherein lies their strangeness. One problem in making sense of these is that it is not entirely clear exactly what Hume means by "object" or whether in each of these places he is using the term in the same way. After the discussion at *T* 200-1, he states:

> I shall at first suppose; that there is only a single existence, which I shall call indifferently object or perception, according as it shall seem best to suit my purpose, understanding by both of them what any common man means by a hat, or shoe, or stone, or any other impression, convey'd to him by his senses.[215]

However, this occurs after the part I am considering and, given he notes his use of language, we might think he was not speaking in this way before. Certainly, the way he discusses these objects can seem sometimes to align better with thinking of them as external objects, a view that would be shored up by this interjection since this would then be him highlighting a new use for the term. On the whole though, it is hard to put too much on this. First then, let's consider the passages and what they might require.

As an example of these things, consider Hume's first discussion of steadfast objects, in this he is concerned to stress that we have no idea of time

[214] T 1.2.3.11; SBN 37.
[215] T 1.4.2.31; SBN 202

without changing, existing things, although "we can easily point out those appearances, which make us fancy we have that idea":

> For we may observe, that there is a continual succession of perceptions in our mind; so that the idea of time being for ever present with us; when we consider a stedfast object at five-aclock, and regard the same at six; we are apt to apply to it that idea in the same manner as if every moment were distinguish'd by a different position, or an alteration of the object. The first and second appearances of the object, being compar'd with the succession of our perceptions, seem equally remov'd as if the object had really chang'd. To which we may add, what experience shews us, that the object was susceptible of such a number of changes betwixt these appearances; as also that the unchangeable or rather fictitious duration has the same effect upon every quality, by encreasing or diminishing it, as that succession, which is obvious to the senses. From these three relations we are apt to confound our ideas, and imagine we can form the idea of a time and duration, without any change or succession.[216]

The object itself does not appeared changed, but we think of it as in time because, firstly, our perceptions change in between our views of it ("The first and second appearances of the object, being compar'd with the succession of our perceptions, seem equally remov'd as if the object had really chang'd."[217]), and secondly, we think of it as an experience that could have changed even if it did not, that is, it is similar to situations in which change has occurred, even if it did not in this case ("experience shews us, that the object was susceptible of such a number of changes betwixt these appearances."[218]). So, just as we imagine ourselves capable of forming an idea of extension without an arrangement of visible or tactile perceptions, we imagine ourselves capable of forming an idea of time without change, even though both ideas are equally contradictory.

The idea of time without change is a fictitious idea for Hume. In this case it is fictitious because we are applying an idea of duration to something

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[216] T 1.2.5.28; SBN 65.

[217] Ibid.

[218] Ibid. The counterfactual here is interesting for other reasons in that it clearly implies the possibility of change which can seem at odds with some of the language Hume uses to describe steadfast objects. In T 1.2.3. and T 1.4.2. these objects are steadfast and "unchange**able**," and in T 1.2.5. the fiction is of an "unchange**able**" duration. Equally, the only other time the term "stedfast" occurs in the *Treatise* it is paired with "immutable." The modal implication of his language here seems entirely at odds with the proposed counterfactual above which implies it could have changed.

unchanging which, strictly speaking, is always improper. (The idea of time can "never in any propriety or exactness be apply'd to [the unchanging], nor can any thing unchangeable be ever said to have duration."[219]) However, fictitious though this idea may be, it may also be of use in our finding a contrast class to the successive. If steadfast objects are unchanging then they are temporally simple and yet, unlike the moments I characterised above, they appear to be a notable part of our experience. If they can indeed coexist with longer successions, they seem to be experientially accessible in a potentially helpful way. Perhaps these objects can provide us with the contrast class we require. Here, I consider two ways of thinking about these cases and how they might help us address the problem of the absent contrast class.

The first is the view forwarded by Baxter: he denies that we should think of time, or our experience of it, as a single timeline wherein all perceptions come ordered. In the above, I motivated the problem using such a framework. It was the constantly changing parts that introduced constant change into the whole and made moments experientially inaccessible. We might then wonder whether rejecting this view is the key to addressing the problem at hand. Although he is not addressing the problem I set out here, Baxter does explore the alternative in an interesting way. He argues that time, for Hume, is best understood in terms of different, separate successions which coexist and change at different rates to each other. To distinguish this kind of coexistence from the kind that cannot occur within a single timeline, he calls the coexistence of different successions "co-duration." For him, steadfast objects retain full and genuine temporal simplicity in spite of their coexistence with successions because they exist on different lines of succession. On this kind of reading, steadfast objects do provide a contrast class, and so offer a way to address the problem I set out above. It is worth giving some time to exploring Baxter's account then.

[219] T 1.2.3.11; SBN 37.

6.4.1. Baxter on Steadfast Objects

For Baxter, the discussion of steadfast objects shows us something interesting and unusual about the way that Hume conceived of time: essentially that time is not best thought of as a single successive line, or ordering of objects. Instead, he takes Hume to accept a view upon which time is an abstraction from many different, separate time lines, which change at different rates to each other, and coexist without necessarily sharing any members (moments) in common. This, he argues, is how we can make sense of Hume's otherwise seemingly paradoxical commitment to the idea that steadfast objects, which are temporally simple, can nevertheless coexist with successions that, being changing, have duration. If we think that time is a linear ordering, it seems unclear in what sense something could coexist with a succession of things without thereby inheriting their temporal complexity. In setting out the problem of the absent contrast class in the above, I accounted for Hume's claims that our perceptions were in perpetual flux by appeal to the fact that, considered as a whole, our experience is constantly changing. Baxter, in effect, rejects this whole, instead thinking in terms of a number of separate intervals. In his discussion he employs a helpful illustration of the problem as he sees it:

> Perhaps the movie camera analogy is the problem. The analogy makes it plausible to assume that there is only a single succession of perceptions in the imagination, just as there is only one reel of film in the camera. But why should we assume this. Let's rather assume something less like a movie camera and more like a mind…[220]

If we think that experience unfolds in the way the movie camera analogy encourages us to think then each moment is comprised of some set of perceptions and no moment lasts longer than any other, for every moment is simple (though comprised of all our coexisting perceptions). Baxter suggests that we reject this way of thinking. Instead, he suggests we think in terms of a number of different successions unified in terms of their features which each occur separate to each other, a characterisation which, as he notes, more resembles a brick wall:[221]

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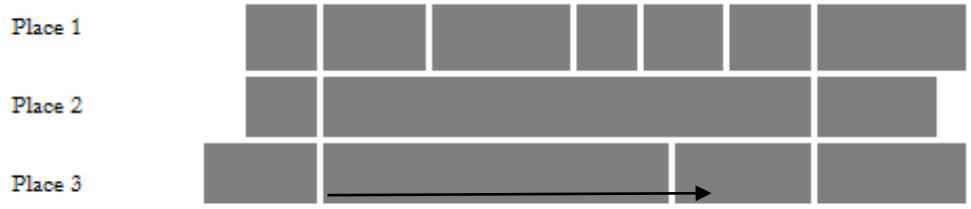
[220] Baxter (2008) p.35.

[221] This diagram is a close approximation of the one offered by Baxter (2008) p.37.



The arrow indicates later-than, from left to right. The blocks represent moments, the lines indicate change between moments. Coexistence is represented by the fact that two blocks could be cut by the same vertical line. Here, then, the middle moment at place 2 coexists with a succession of moments at place 1 and place 2 but, in theory, does not thereby inherit duration from this fact because, in itself, it is not successive. Importantly to note, although Baxter also illustrates his own version of this diagram using place as an indicator, he notes that the theory is more complex than this. Some successions will be unified by sameness of place but many successions will not, strictly speaking, occur in any place at all. The unifying role will be played in those cases by the principles of association: temporal contiguity will be crucial in all, that is, our tendency to feel a connection between that which is contiguous in time. For spatial perceptions, their perceived spatial contiguity will contribute. Successions which do not occur in any place can still be unified by appeal to resemblance or causation:

> [I]f Hume enjoys the succession of tastes in a sip of a complex claret, their resemblance as tastes and their having a common cause helps unify the succession. If Hume simultaneously listens to a birdsong and feels a change of mood, each of these two successions of perceptions likewise are unified without appeal to sameness of place.[222]

These unifying features provide the impetus for another interesting feature of these successions: they may, in some cases, share members in common. Baxter gives the example of the left-hand and the right-hand parts of a piano piece coming together for a bar before splitting off into two separate melodies again. The diagram as it stands does not leave room for this, but

[222] Baxter (2008) p.38.

Baxter's main aim is in highlighting the nature of the possibility of coexistence, so he takes it as sufficient to those ends.

If we adopt Baxter's interpretation we seem in a position to find a contrast class to the successive. For, in our experience, we find moments which are simple and yet noticeable. These moments are not over so quickly we cannot pick them out because they remain steadfast and unchanging whilst other separate successions of things change around them. If we think about time for Hume in the way that Baxter suggests, then a contrast class becomes available: we simply compare some moments (unchanging ones) with the successions they coexist with. When contrasted with the unchanging, we might think that the successiveness of temporally complex experiences could become apparent to us.

6.4.2. Some Reservations and an Alternative Proposal

If we adopt Baxter's view, then it seems we can find a solution to the problem of the absent contrast class. However, adopting Baxter's view does carry with it some costs. Here I will explore some reservations I have with this approach. The prime concern I will explore here is that Baxter's characterisation of moments seems problematically at odds with Hume's commitment to the impossibility of coexisting moments. Baxter himself notes that, at face value at least, his interpretation is at odds with textual evidence. I will look at how he explains this away, and give some reasons for remaining sceptical. However, for all that I am not convinced by his characterisation of time itself, I think he presents a plausible interpretation of our experience of time and the way experiencing time comes to feel to us given the kind of cognisers we are. The way that the principles of association come in to bind successions also provides a way by which we can understand how experience is felt to contain unchanging things which contrast with changing things. This, I suggest, is enough as it still enables a contrast class to be found, albeit a relative rather than absolute one. For those happy with Baxter's stronger formation, the problem of finding a contrast class is already solved. For those looking for a more moderate

interpretation, there is one available. Either way, the problem of the absent contrast class can, I suggest, be adequately addressed.

To begin then, I will explain my reservations with the way Baxter proceeds. In particular, one might object to his characterisation of moments. For him, moments are abstractions from members of successions ("the idea of a moment is the idea of a member of a succession qua member"[223]). He states further that "moments of time are abstractions from single things in time. Each moment is an abstraction from the temporally simple object occupying it."[224] In rejecting the single timeline movie camera view, Baxter's view of moments is to be different to the view I set out above where each experiential moment contains all the perceptions a perceiver has at that time. Since he allows for different successions to coexist, his moments are members of particular successions, rather than moments which comprise all experiences at a time. To take an example, a moment for Baxter could be an abstraction from a single musical note, whereas, on the conception of moments I set out above, any moment containing the note would, in all normal cases of experience anyway, also contain innumerable other perceptions had by the experiencer at the same time (the feel of the chair, the emotions the music evokes, the smell of the room, etc.).

Since Baxter is committed to different successions coexisting with each other (this is the essence of the idea of co-duration explored above), he takes it that different moments can coexist. As already considered in chapters 2 and 3, this is at odds with Hume's explicit statements on the matter. To remind, Hume tells us that "'Tis a property inseparable from time, and which in a manner constitutes its essence, that each of its parts succeeds another, and that none of them, however contiguous, can ever be co-existent."[225] Hume ends the paragraph this is taken from by stating that supposing coexistent moments amounts to an "arrant contradiction." Elsewhere, he states that "'Tis also evident, that these parts [the moments of time] are not co-existent: For that quality of the co-existence of parts

[223] Baxter (2008) p.17.
[224] Baxter (2001) p. 130.
[225] T 1.2.2.4; SBN 31.

belongs to extension, and is what distinguishes it from duration."[226] Equally, that "time or succession, tho' it consists likewise of parts, never presents to us more than one at once; nor is it possible for any two of them ever to be co-existent."[227] The contradiction inherent in the coexistence of moments seems deeply rooted in Hume's theory of what time, in essence, is. As I argued in chapters 2 and 3, this may be because of deep conceptual features relating to time and moments.

To his credit, Baxter notes this textual evidence, but he nonetheless takes Hume's discussion of steadfast objects to overrule it, opting to reinterpret these comments in light of the commitment to coexistence he takes steadfast objects to demonstrate. His proposal for squaring the difficulty rests on two forks: firstly, he notes that Hume tends to use "time" and "succession" interchangeably. In light of this, he reinterprets the comments immediately above as making claims about successiveness rather than time. It is then part of the concept of successiveness that the moments of a succession do not coexist. However, Baxter suggests, time need not exhibit this restriction (because of his commitment to multiple timelines). Secondly, Baxter suggests that the consequences of the commitment to steadfast objects may have simply escaped Hume. By drawing a distinction between the parts of each succession (which cannot coexist), and the parts of different successions (which can coexist *with parts of other successions*), Baxter has made room for coexisting moments. He suggests that Hume does not note this particular extension to his theory because "recognizing co-duration requires unnatural care and attention. What is natural is to attribute duration to steadfast objects [this is the natural fiction Hume takes us to be inclined towards] and so be unable to see the need for, or even the possibility of, coexisting moments."[228]

I am unconvinced by the first point. Although Hume does seem to use "time," "succession," and indeed "duration" interchangeably at time, Baxter has not persuaded me that the quotations above are cases of this. The first

[226] T 1.2.3.8; SBN 36.
[227] T 2.3.7.5; SBN 429.
[228] Baxter (2008) p.43. For an earlier formation see Baxter (2001) p. 140.

quotation is taken from Hume's third argument against the infinite divisibility of time, and from the section explicitly titled "On the infinite divisibility of time and space." Here I do not see any motivation for taking him to be talking about the qualities of successiveness rather than of time. The arguments I made in chapters 2 and 3 perhaps make my position on these clear already: given the way Hume's approach is restrained by his epistemology and the concept of time as requiring change, I think we have a way to explain exactly why it is a contradiction to suppose either two moments of time or two moments of experience to coexist. Time requires change, and so coexisting moments require coexisting contrary states of affairs. It is true that I take these comments to be about the moments of time itself, rather than the moments of experience. However, for the reasons mentioned above, it is not clear to me why the moments of experience would be different in a way that means they could be successive (though they might feel different – of which more in a moment). Even given this though, these comments certainly seem to be about *time*, rather than successiveness.

I also see no reason to take Hume to be discussing successiveness rather than time in the second quotation. Regarding the third, although Hume introduces the comment as being about "time or succession" thereby indicating at the least that he is not going to distinguish the two, the comments are given in the context of a discussion of the "different properties of space or time." He may not be distinguishing between the two terms, here but it seems more like "succession" is being used for "time", rather than "time" for "successiveness." Although Baxter is right to point out that Hume does sometimes use the language in the way he describes, he does not offer us additional reasons for thinking these cases constitute that kind of looseness and, even in the last quotation which seems to employ "time" and "succession" interchangeably, this does not seem to support the idea that Hume is discussing successiveness. As such, Baxter has not done enough to support our reading any of these passages in the way he suggests.

So to Baxter's second point: that Hume simply did not notice that his view of time entailed coexisting moments because recognising co-duration requires a much higher level of care and attention. Certainly it is not inconceivable that Hume's theory requires something that he did not recognise. However, if we can explain what he says from within a more moderate view, that is less in conflict with the text, that surely is preferable. One way we might go about this is to note that Baxter draws a distinction between time and our experience of it, but then appears to posit coexisting moments in both cases:

> What makes moments members of the same succession of moments? Answering the question requires distinguishing time as it is from time as we experience it. *Time as it is consists simply of moments later than some, coexistent with others, and earlier than still others*. It is not objectively divided up into successions with additional principles of unity. However, time as we experience it is different. We experience time by experiencing various coexistent successions of objects. It is the ideas of these that we use to form the abstract idea of time. The experienced unity of successions of objects is a result of the principles of association of ideas [my italics].[229]

If Baxter were only to ascribe coexistence to the moments of experience, we could allow that, at least in the sense he is using moments, there might be less to object to here than it initially sounds. The moments that Baxter picks out are abstractions from members of successions. The successions Baxter picks out appear to be, in some sense, mentally constructed. Which is just to say that they are united by the principles of association. One might think we experience a mess of perceptions and we interpret it in terms of different, coexisting successions. If we think of successions in this way, and we allow Baxter his particular way of characterising moments as members of successions, the coexistence of these moments does not seem to result in contradiction. Given the separate successions, the moments can coexist because they do not express the same part of some one thing as being one way and another way at the same time. A spatial parallel makes this point clearer: to say that some single spatial point is entirely red and entirely blue is a contradiction, but there is no contradiction in having a blue point in one

[229] Baxter (2001) p.135-6.

place and a red point elsewhere. To the extent that Baxter's successions are separate to each other, the objection I levelled at coexisting moments in chapter 2 does not seem to arise for his view of moments: the moments of two different successions do not express contradictory states of any one thing, they merely express one part of the experiential whole as being one way and another part of it as being another. So, if we can allow Baxter his separate successions and his view of moments, perhaps the problem of coexistence does not occur. My core concern though, is that separate successions seem to be the result of the principles of association having been at work. Separate successions do not seem to be part of the raw matter of experience, and still less do they seem to be the way that time itself exists. But if that is the case, in what sense do we have coexisting moments of time? One might even think that, if the principles of association mainly are at work in shaping the ideas we form from experience, this is not even sufficient support for positing coexisting moments of experience.

In sum, I feel Baxter oversteps the bounds of what we have good reasons for thinking Hume thought. However, his appeal to the principles of association in encouraging us to think of time in terms of separate successions seems absolutely right and, I suggest, sufficient to address the problem of the absent contrast class. I suggest a more moderate route is available: we allow that the principles of association process the content of experience in certain ways, and so encourage us to form ideas of particular successions which we can then think of parts of the whole which change or do not change relative to other things.

As a claim about the ideas we form from experience, it seems that the principles of association do indeed have the effect of hiving off parts from the experiential whole that we can then see as bearing different properties to each other. This is a fair characterisation of how, on Hume's view, we come to form ideas of objects, and also explains why we take these objects to persist through time. Under the influence of the principles of association, we come to think in terms of hats and shoes, rather than blocks of colour. We pick out the table and the apple from the visual array, and feel their

component parts to be bound in a way that the whole is not. We bind other qualities into these objects, connecting, say, the green shape of the apple and the co-occurring smooth feel. Equally, qualities like tastes or smells, which Hume tells us are not located in extension, come to be seen as, in some loose sense, in the object to which they are constantly conjoined, eventually feeling as much a part of it as its colour or shape.[230] Objects, at least as we know them, are bundles of ideas, so "a particular colour, taste, and smell are qualities all united together in this apple."[231] The idea of the apple is a complex formed of these distinct but unified elements, joined by their felt connectedness and apparent conjunction. This binding does not stop with sensory qualities: We go on to associate feelings that arise in us with the objects that provoke these feelings until even the feelings of internal reflection come to be to some degree merged with the objects of sense.

These examples already show us something interesting about the effect of this feature of human nature on the capacity to perceive and ascribe properties. Specifically, they show us that we can come to see parts of our experiences as exhibiting properties different to the properties exhibited by the experiential whole: the apple is green, the weather is miserable, the ball is moving. Considered in terms of visual experience, the experiential whole is of innumerable shades. However, this does not mean I cannot ascribe a particular colour to the apple. Equally, these cases demonstrate that Hume does not see this partitioning as confined to the synchronic nature of objects. Instead, we experience the world as containing objects that persist through time; moving, growing, shrinking, changing their properties along multiple avenues at once. Hume's example of the fire in his study illustrates this: When Hume returns to his study after an hour and forms a belief that the fire has died down he forms this belief because the bundle of perceptions thought of as representing a fire, though different to the bundle of perceptions previously thought of as representing a fire, is still displaying

[230] "[S]upposing we consider a fig at one end of the table, and an olive at the other, 'tis evident, that in forming the complex ideas of these substances, one of the most obvious is that of their different relishes; and 'tis as evident, that we incorporate and conjoin these qualities with such as are colour'd and tangible. The bitter taste of the one, and sweet of the other are suppos'd to lie in the very visible body," T 1.4.5.11; SBN 236
[231] T 1.1.1.2; SBN 2.

roughly similar properties (though diminished), in roughly the same place and at a close, though different, time. In the past, objects resembling the fire have conducted themselves similarly and so he comes to think that *the* fire has died down, as opposed that the first fire has been replaced by a second, smaller fire.[232]

These tendencies come to impact on how we view experience itself and what we take it to present. In chapter 5 I discussed the idea that we come to imagine that spatial depth is just given in sensation, here perhaps something similar occurs. We are inclined to think in terms of objects which persist and change relative to each other and we may come to feel that the world is of this sort too. However, we can explain how we come to do this without posting coexisting moments of time, or even coexisting moments of experience. The principles of association are a powerful enough tool to do this work on their own.

By these means then, I suggest we can find a contrast class of ideas even if the content of experience may be constantly changing, and so constantly successive in the way I set out above. For, in spite of this, the ideas we form from experience can (and do) exhibit contrasting temporal properties to each other. In terms of our ideas then, it seems we might have a contrast class that could do the job because some ideas are successive, some are not.

In terms of experience the question is harder to address but it strikes me as plausible that we could have a relative contrast class here too. Just as our ideas of objects encourage us to split the visual field into things, it seems likely that our feeling parts of the world to be different objects to other parts will encourage us to feel experience to present us with different successions that we feel to be more apart than they perhaps really are. Consider Hume's discussion of an unchanging perception:

> When we fix our thought on any object, and suppose it to continue the same for some time; 'tis evident we suppose the change to lie only in the time, and

[232] T 1.4.2.19; SBN 195.

> never exert ourselves to produce any new image or idea of the object... The passage from one moment to another is scarce felt, and distinguishes not itself by a different perception or idea, which may require a different direction of the spirits, in order to its conception.[233]

Thinking only of the perception of the object, it stays the same. Other perceptions may change around it though, it is just that the passing of moments is scarce felt. We can selectively attend to parts of our experience over others. This seems to make a relative contrast class a possibility even within experience. To the extent that we come to feel the music is different to the painting, we might feel one to be successive and the other not, even as we experience them.

In short, I see no reason to reject the movie camera as a view of the content of experience for we can explain both the ideas that result, and the ways we feel the world to be, if we only appeal to the principles of association. If we do this we do not have to say that the moments of time, or of experience, coexist, so we do not have to explain away significant textual evidence, or suggest that Hume failed to see the implications of his account. If we do this I have suggested we can also maintain that there exists a contrast class to the successive, or at least, a relative contrast class. Since we are trying to explain our thinking and ideas, a relative contrast class seems sufficient. In the next chapter I will examine how this contrast class might enable us to form the requisite resemblance classes to develop the general idea of time, in spite of its elusive and cross-modal nature.

[233] T 1.4.2.33; SBN 203.

7. Forming the General Idea of Time: Varieties of Resemblance

7.1. Introduction

In the previous chapter I highlighted two challenges: the problem of the seemingly elusive resemblance we are required to see in the case of time (worsened by the apparent unavailability of a contrast class) and the problem of cross-modal resemblance-association. Having addressed the problem of the contrast class, we are still left with the question of whether, even in this situation, we can account for our noting the requisite resemblances. From these challenges I set out two aims: firstly, the interpretive aim of seeing what accounting for Hume's theory of the idea of time could tell us about how he conceives of other topics, including the relation of resemblance. Secondly, the critical aim of evaluating whether the formation of the idea of time results in unacceptable circularity from within a Humean framework. It is worth clarifying these aims a little before I forward a response.

Firstly then, I am motivated by an interpretive question: given that Hume tells us we can form the idea of time, what does that imply about how he understands resemblance? Thinking about what this idea presses us towards a deeper analysis of the phenomenon of resemblance and how it provokes association in cognisers like us. Forming a greater understanding of resemblance in Hume's work is all the more valuable because of the many and varied roles resemblance-association plays and how it shapes our experience of the world. Understanding this concept better is not just of benefit to those interested in his work on time then, it has far broader application. Hume tells us that we perceive resemblance in extremely disparate cases and, unlike Berkeley, across sense-modalities; what does this tell us about how he conceived of association, of general ideas, and of resemblance?

Secondly, looking deeper here is of interest in critically assessing Hume's account of time. He stands accused of forwarding an account that results in

circularity in that we are required to presuppose an understanding of the very idea we are trying to form. If his account really does require this, it is inadequate. Many of Hume's critics take this second step in forming the idea of time (that is, the move from ideas of particular times to a general idea of time) to be a serious barrier and if he is unable to explain it then the idea of time remains problematic, even if we can account for the formation of ideas of particular times. If forming the idea of time is so inexplicable that the only route available involves presupposing the very idea we are seeking to explain then that tells us something interesting (and seemingly troubling) about Hume's theory and, potentially, about empiricist approaches more broadly. If, however, there is an interpretation available on which Hume's account is not circular, this would also tell us something interesting about his approach and, potentially, about the viability of empiricist treatments of the idea of time too.

In his discussion of the idea of time, Baxter considers and immediately dismisses the objection of circularity considered above. He states that, "[a] certain point of resemblance might intrude upon our attention if we are naturally susceptible to the intrusion."[234] This natural susceptibility need not be explained in terms of our already having the idea of time, instead: "[a]s long as successiveness naturally intrudes on our attention and we naturally find it convenient to coin a word for it to remind us of things that resemble with respect to successiveness, Hume's account is noncircular."[235] Perhaps this is so and, if it is, all the better for Hume. However, looking at how and why this might be so offers us a way of going deeper into so many issues, and so a more thoroughgoing analysis feels worthwhile. Equally, to those unconvinced by Hume's capacity to account for these ideas, and I cited several such people in section 6.3.1., merely stating that we are susceptible to forming these resemblance-associations does not seem like a satisfying response. To reply to the charge of circularity more needs to be said.

Pressing for something deeper seems potentially rewarding then. However, in doing so, we must be mindful to tread a careful path. A full and complete

[234] Baxter (2008) p.20.
[235] Baxter (2008) p.20.

understanding of the mind's operations (and so of the hidden mechanisms that drive resemblance-association) is epistemically inaccessible to us, and would seem to overstep bounds Hume himself is keen to comply with. Instead, as discussed in chapter 5, we at best know the principles of association by their effects. In seeking a fuller explanation, then, it would be insensitive to Hume's stance if we did not also keep in mind the sorts of explanatory limitations he insisted upon. Asking for the deep causes of association and what makes it so that we are the kind of associating creatures that we seem to be, would seem to be beyond this. However, to presume the very idea in question is unsatisfying. I will argue that there is an interesting path to be walked in between these extremes. On the question of circularity, we can perfectly well ask whether we can account for the idea of time from within the framework which Hume has laid out and by appeal to tools he recognises. Equally, it seems we can use what we find to further illuminate related issues in Hume. These are the tasks of this chapter.

With these aims and cautions in mind, I proceed by first considering the interpretive question of what the idea of time might tell us about resemblance. I contend that the idea of time requires quite a particular kind of resemblance. In order to support this claim it is necessary to take a look at the forms of resemblance recognised in Hume's work more broadly. Having shown that resemblance comes in a variety of forms I will draw out a kind that does not seem to rely on sameness or even similarity in the content of the related ideas, this is the kind that has the most promise in explaining the resemblance which different temporally complex ideas bear to each other. Having established the presence of this kind of resemblance in Hume's work, I will finish with a detailed examination of exactly how this kind of resemblance might help us understand the formation of the idea of time. To finish, I will return to the critical questions. I conclude that, if we think in terms of this particular variety of resemblance, we can respond to the challenges set out above. We can explain how otherwise elusive, cross-modal resemblances could nonetheless be formed, and we can do this in a way that does not result in circularity.

7.2. The Nature of Resemblance

In Hume's work, the phenomenon of resemblance has many forms and appears in many places. Our natural inclination to associate ideas in line with perceived resemblances plays a role in the formation of many of the most important themes discussed in Hume, including the idea of the self, of causation, even our belief in an independent, continuous external world. Resemblance is also responsible in no small way for many fictitious ideas we take ourselves to have. It is, according to Hume, "the most fertile source of error; indeed there are few mistakes in reasoning, which do not borrow largely from that origin."[236] For better or worse, perceived resemblance is presented as having a powerful influence upon human cognition. The important and pervasive role of resemblance in human thought runs deep even if it can lead us astray.

To better understand the resemblance involved in the idea of time, I will consider a variety of examples Hume gives. Resemblance is a relation though, and it will be helpful for the later discussion to say a little something about Hume's view of relations more generally. Hume draws a distinction between so-called "natural" and "philosophical" relations.[237] Resemblance, occurs as both a natural and a philosophical relation, and so admits of this duality. To begin, I will briefly discuss the two kinds and argue that the philosophical relation is too ubiquitous to be responsible for the formation of the general idea of time. When thinking about the resemblance involved in forming the idea of time, we must look to the natural relations. This, in turn, means that we must also think about association.

7.2.1. Resemblance as both a "Natural" and a "Philosophical" Relation

Firstly then, Hume tells us that resemblance (like causation and contiguity) is both a natural and a philosophical relation. These two senses of relation correspond to two very different ways that we use the word "relation":

[236] T 1.2.5.21; SBN 61.
[237] T 1.1.5.1; SBN 13.

> The word Relation is commonly used in two senses considerably different from each other. Either for that quality, by which two ideas are connected together in the imagination, and the one naturally introduces the other, after the manner above-explained; or for that particular circumstance, in which, even upon the arbitrary union of two ideas in the fancy, we may think proper to compare them.[238]

Considering the two senses in turn, the first and most familiar is the sense of relation which describes a connection or association in the imagination. The natural relations correspond to Hume's principles of association. They are relations we perceive as holding between perceptions in light of qualities that produce associations in thought and, as a result of this, guide the imagination through its ideas: "these qualities produce an association among ideas, and upon the appearance of one idea naturally introduce another."[239] When I conceive of one idea then, I will tend to be led to think of other ideas connected to it by apparently manifesting those qualities. This is the first sense in which resemblance enters the picture:

> 'Tis plain, that in the course of our thinking, and in the constant revolution of our ideas, our imagination runs easily from one idea to any other that resembles it, and that this quality alone is to the fancy a sufficient bond and association.[240]

In his discussion, Hume identifies three key triggering qualities for this association: we are disposed to associate (and so move easily from one thought to the other between) things which are perceived to i. resemble each other, ii. be contiguous in time or space, or iii. be causally related to each other. Hume does, in the *Enquiry*, leave open the possibility of further triggers for this association but these three are at least ones we consistently find throughout.[241]

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[238] T 1.1.5.1; SBN 13.
[239] T 1.1.3.2; SBN 11.
[240] Ibid.
[241] The relation of "Contrast or Contrariety" is at one time offered as a possible fourth [take sentence out of passive: Hume at one time offered the relation …]. He also accepts it is a connexion between ideas but suggests it might better be explained as a mixture of causation and resemblance: "Where two objects are contrary, the one destroys the other; that is, the cause of its annihilation, and the idea of the annihilation of an object, implies the idea of its

This sense of relation then simply means related in thought, that is, related by a thinker. As mentioned in section 5.4.1., Hume is not always consistent in describing the force and reach of these connections: they are described sometimes as "permanent, irresistible, and universal", without them "human nature must immediately perish and go to ruin."[242] They fall short of logical implication certainly but are clearly powerful and, Hume tells us, "the cause why, among other things, languages so nearly correspond to each other; nature pointing out to every one those simple ideas, which are most proper to be united into a complex one."[243] A thought that is echoed in the *Enquiry*:

> Among different languages, even where we cannot suspect the least connexion or communication, it is found, that the words, expressive of ideas, the most compounded, do yet nearly correspond to each other: a certain proof that the simple ideas, comprehended in the compound ones, were bound together by some universal principle, which had an equal influence on all mankind.[244]

At other times they are a "gentle force that commonly prevails."[245] Little nudges that smooth the passage between ideas and so serve to sway the mind by degrees, encouraging it along certain pathways:

> [H]owever changeable our thoughts may be, they are not entirely without rule and method in their changes. The rule, by which they proceed, is to pass

former existence." EHU 3.3n4; SBN 24. "But that this enumeration is complete, and that there are no other principles of association except these, may be difficult to prove to the satisfaction of the reader, or even to a man's own satisfaction. All we can do, in such cases, is to run over several instances, and examine carefully the principle which binds the different thoughts to each other, never stopping till we render the principle as general as possible." EHU 3.3; SBN 24. This is a nice instance of the flexibility that seems to exist even amongst what we might think of as the absolutely core elements of Hume's philosophy. As a further point of note: although here I focus on the role of the natural relations in connecting ideas, Hume also thought that resemblance (though not causation or contiguity) played a role in the association of impressions: "All resembling impressions are connected together, and no sooner one arises than the rest immediately follow. Grief and disappointment give rise to anger, anger to envy, envy to malice, and malice to grief again, till the whole circle be compleated. In like manner our temper, when elevated with joy, naturally throws itself into love, generosity, pity, courage, pride, and the other resembling affections... 'Tis evident, then, there is an attraction or association among impressions, as well as among ideas; tho' with this remarkable difference, that ideas are associated by resemblance, contiguity, and causation; and impressions only by resemblance." T 2.1.4.3; SBN 283.

[242] T 1.4.4.1; SBN 225.

[243] T 1.1.3.1; SBN 10-11.

[244] EHU 3.1; SBN 23.

[245] T 1.1.3.1; SBN 10.

> from one object to what is resembling, contiguous to, or produc'd by it. When one idea is present to the imagination, any other, united by these relations, naturally follows it, and enters with more facility by means of that introduction.[246]

Arguably we make best sense of this duality in force by noting that many small influences can, over time, create a great force. Hume sometimes toys with a physical explanation of this, though his adherence to this is not consistent:[247]

> When I receiv'd the relations of resemblance, contiguity and causation, as principles of union among ideas, without examining into their causes, 'twas more in prosecution of my first maxim, that we must in the end rest contented with experience, than for want of something specious and plausible, which I might have display'd on that subject. 'Twou'd have been easy to have made an imaginary dissection of the brain, and have shewn, why upon our conception of any idea, the animal spirits run into all the contiguous traces, and rouze up the other ideas, that are related to it.[248]

As Kail describes the process in discussing the notable similarities between Hume's natural relations and Malebrache's "*liason naturelle,*" it brings to mind the way in which a steady flow of water can, over time, gouge rock:

> Ideas become linked in the imagination, and inferential dispositions become acquired, in virtue of repeated experience affecting the structure of the brain, leaving channels through which animal spirits flow. Like water, the contents of the imagination seek the easiest path, which means the deepest and widest traces in the brain.[249]

For my purposes here, the most crucial thing to note with natural relations is that, being connections between thoughts in the mind of a thinker, these relations are subject-dependent in an important way. As such, the fact that a thinker feels a relation is no guarantee that there exists any such connection in the world. Causality is perhaps the prime example of this: repeated experiences of their constant conjunction may lead me to form a connection in thought between seeing the barometer fall and the event of a storm which

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[246] T 1.4.4.2; SBN 283.
[247] As he notes before giving this explanation: "The phænomenon may be real, tho' my explication be chimerical." (T 1.2.5.19; SBN 60)
[248] T 1.2.5.20; SBN 60.
[249] Kail (2007a), p. 74.

I might take to be evidence of a casual relation. However, that this connection exists in my thought says nothing of whether such a relation exists in your mind, and still less about whether there is such a causal connection in the world.

These are the natural relations then. Contrasting with these is the second sense of relation which Hume terms "philosophical relations." Philosophical relations are more numerous and varied and do not entail a connection in thought. Instead philosophical relations tell us something of the different ways in which it is possible to compare ideas. In T 1.1.5. Hume tells us there are seven philosophical relations: resemblance, identity, relations of time and place, proportion in quantity or number, degrees in any quality, contrariety, and causation. He divides them into two classes. Firstly, there are those which depend solely on the related ideas for whether they hold or not. These are resemblance, contrariety, degrees in quality, and proportions in quantity or number. Secondly, there are relations that can change whether they hold or not without a change in the ideas they relate. These are contiguity, distance, and causation.

As a philosophical relation of the first sort, whether two ideas fall into a philosophical relation of resemblance depends solely on the content of the two ideas. As a philosophical relation, resemblance is ubiquitous: Hume tells us that, in order to compare any two ideas, there must be some resemblance between them which, it seems, forms the grounds of the chosen comparison. As such, our ability to compare ideas in accordance with any of the philosophical relations first requires that some relation of resemblance along some line holds between them:

> [Of the philosophical relations] [t]he first is resemblance: And this is a relation, without which no philosophical relation can exist; since no objects will admit of comparison, but what have some degree of resemblance. But tho' resemblance be necessary to all philosophical relation, it does not follow, that it always produces a connexion or association of ideas.

To compare apples and oranges I can compare them by size, shape, colour, taste, aerodynamics, and in innumerable other ways. However, if I do not

view them as similar in some way (even if they are at the opposite ends of the spectrum for whichever feature I am comparing them in light of) I cannot compare them at all.

Our ability to compare along any line then requires a grounds of comparison and there can be no grounds of comparison, Hume tells us, without a relation of resemblance. To support this he gives the example of the relation of contrariety, a relation which we might think excludes resemblance between its objects. Even in this case though, he argues there must be a degree of resemblance, specifically, if we do not think of two ideas as resembling in some way then we cannot point to the respect in which they're contrary. Indeed,

> no two ideas are in themselves contrary, except those of existence and non-existence, which are plainly resembling, as implying both of them an idea of the object; tho' the latter excludes the object from all times and places, in which it is supposed not to exist.[250]

As a philosophical relation, then, resemblance is everywhere. Seemingly as a result of this, philosophical resemblance does not provoke association in thought:

> When a quality becomes very general, and is common to a great many individuals, it leads not the mind directly to any one of them; but by presenting at once too great a choice, does thereby prevent the imagination from fixing on any single object.[251]

The philosophical relation of resemblance may be ubiquitous, but, as a result, it does not produce association.

Given this, I suggest we can exclude the philosophical relation of resemblance from our search for the kind of resemblance that matters in forming the idea of time. If it does not produce association, how can explain

[250] T 1.1.3.8; SBN 15.
[251] T 1.1.5.3; SBN 14.

the formation of the general idea which explicitly relies on our forming resemblance classes of related ideas? Although time and space are philosophical relations according to which we can compare objects, the kind of resemblance Hume points to in our forming the idea of time is first and foremost of a kind that produces association, for it must in order that the general idea be formed at all. Equally, the kind of resemblance that is involved in forming the idea of time is selective in the associations it produces. It picks out some ideas as resembling and not others.[252] It seems we must be concerned with the natural relation of resemblance, then, and not the philosophical. Given the differences between the natural and the philosophical relations of resemblance we can conclude that the class of things any given thinker associates as resembling is going to be far smaller than the class of things that actually do admit of some degree of resemblance. Accounting for the difference between these classes of things involves a deeper look at the varieties of resemblance that Hume discusses and an examination of which conditions inclined us to associate two things together in virtue of a perceived resemblance.

7.2.2. Varieties of Resemblance

Association in virtue of perceived resemblance, just like other forms of association, is the result of at least two factors: i. our particular cognitive habits, and ii. our experience and its features (or, to use Hume's phrasing, the "qualities" of experience). It relies both on our being the sorts of creatures who respond to certain kinds of stimuli with association and experience providing the relevant kinds of stimulation. In the case of causal association, for example, Hume points to triggering factors like constant conjunction and temporal priority of the "cause." In this section I will

[252] On time and space as philosophical relations Hume tells us: "After identity the most universal and comprehensive relations are those of Space and Time, which are the sources of an infinite number of comparisons, such as distant, contiguous, above, below, before, after, &c." Though providing the basis for an infinite number of comparisons, these relations ground reflective acts of comparison, not association.

highlight some examples Hume offers regarding resemblance and assess their use in accounting for the idea of time.[253]

As an intuitive first pass at what provokes a feeling of resemblance we might point to ideas which exhibit sameness of content. When I glance at my mug and form an idea of how it looks at 803 then glance again at 8:05, I form a second idea which appears to exhibit much of the same intrinsic content as the first. The same colours, shape, and patterns all seem to be exhibited in the two ideas. Hume tells us in cases like these that "the exact resemblance of our perceptions makes us ascribe to them an identity."[254] Exact resemblance in this case encourages us to connect these two ideas and think of them as two instances of one enduring thing. For a further example of this we might look to Hume's case in which a "picture naturally leads our thoughts to the original," as given in the *Enquiry*.[255] In these cases sameness of content seems to ground a feeling of resemblance.

However, in the case of time this does not seem to be the kind of resemblance that provokes the feeling of sameness. As already noted, forming the idea of time relies on a resemblance that holds across very disparate cases and across different sense-modalities. A succession of felt sensations and a succession of heard sounds resemble in their being successive, but it does not seem that they share any content in the sense given above. This kind of intuitive resemblance does not seem like it could play the role of grounding the idea of time then. However, not all resemblance appeals to sameness of content: in fact, Hume denies that all resemblance requires the resembling perceptions have circumstances in common and seems to embrace far a broader understanding of the phenomenon. It is worth citing his comments in full:

> 'Tis evident, that even different simple ideas may have a similarity or resemblance to each other; nor is it necessary, that the point or circumstance of resemblance shou'd be distinct or separable from that in which they differ.

[253] I will only discuss a few cases of Humean resemblance, there may be more. For a thorough run through of some of the varieties of resemblance appealed to by Hume see Gamboa (2007).
[254] T 1.4.2.40; SBN 208.
[255] EHU 3.3; SBN 24.

> Blue and green are different simple ideas, but are more resembling than blue and scarlet; tho' their perfect simplicity excludes all possibility of separation or distinction. 'Tis the same case with particular sounds, and tastes and smells. These admit of infinite resemblances upon the general appearance and comparison, without having any common circumstance the same. And of this we may be certain, even from the very abstract terms *simple idea*. They comprehend all simple ideas under them. These resemble each other in their simplicity. And yet from their very nature, which excludes all composition, this circumstance, in which they resemble, is not distinguishable nor separable from the rest. 'Tis the same case with all the degrees in any quality. They are all resembling, and yet the quality, in any individual, is not distinct from the degree.[256]

There is much of importance in this passage. Firstly, Hume rejects the idea that all resemblance involves sameness of content. Instead, different "sounds, and tastes, and smells" can admit of resemblances without having any content in common. That he notes they admit of "infinite resemblances" upon "comparison" might lead us to believe he is thinking of the kind of philosophical resemblance I highlighted above, which is a possible source of concern if what we require in the case of time is a natural sense of resemblance. However, let's first consider the alternative forms of resemblance that emerge in more depth and see whether they can be of use.

Firstly then, Hume tells us that blue and green resemble more than blue and scarlet. Leaving aside their simplicity for now (I will address that next), what he seems to appeal to here is not same content but something more like closeness of content. Some ideas are more alike than other ideas even if they are not exactly alike. Gamboa terms this inexact closeness "likeness."[257] Seemingly, this likeness exists in virtue of some feel of qualitative closeness. A second case of this close but inexact resemblance (and indeed of resemblance as coming in degrees) can be found in Hume's discussion of causal cases:

> It seems evident that, if all the scenes of nature were continually shifted in such a manner that no two events bore any resemblance to each other, but every object was entirely new, without any similitude to whatever had been

[256] T 1.2.3.8n1;" SBN 637.
[257] Gamboa terms this kind of closeness "likeness," for more see (2007) pp. 24-5.

> seen before, we should never, in that case, have attained the least idea of necessity, or of a connexion among these objects.[258]

Here new cases bear a "similitude" to what has occurred before and are felt to be causal partly because they resemble prior cases judged to be causal. Each new case is different, so the resemblance is not exact. However, they are sufficiently close for us to feel them to be causal. In this causal case there is also an echo of the notion that resemblance comes in degrees. Just as blue might be more similar to green than to red, we can judge new causal cases to be more or less similar to other cases. What is more, the degree to which they seem similar to previous cases affects the strength of the causal judgement we are willing to make about them:

> Tho' the several resembling instances, which give rise to the idea of power, have no influence on each other, and can never produce any new quality in the object, which can be the model of that idea, yet the observation of this resemblance produces a new impression in the mind, which is its real model. For after we have observ'd the resemblance in a sufficient number of instances, we immediately feel a determination of the mind to pass from one object to its usual attendant, and to conceive it in a stronger light upon account of that relation. This determination is the only effect of the resemblance; and therefore must be the same with power or efficacy, whose idea is deriv'd from the resemblance.[259]

This kind of resemblance does not require sameness of content, but it does seem to require closeness of content. Applied to the case of time we might worry that a similar difficulty emerges as did for the first intuitive characterisation of resemblance: in one sense, particular successive ideas are not even very like each other. The succession of flavours in a mouthful of food and the succession of sights as we watch a bird swoop past by do not just not share any content exactly, their content does not seem to be at all alike. In one sense they do seem to bear a likeness to each other, but this is not in respect of similar content, instead the likeness they bear to each other is structural, i.e. they are both successive. This brings me to the second kind of resemblance that Hume highlights in the passage from the Appendix: structural resemblance.

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[258] EHU 8.5; SBN 82.
[259] T 1.3.14.19; SBN 164-65.

When Hume first introduces resemblance he speaks of qualities which are "common to a great many individuals."[260] Here resemblance appears to be grounded in shared properties. For any two things you care to choose, one reason we might feel the first to resemble the second is if there is some property P such that both perceptions have property P. So far, I have been focused on content and, because of the cross-modal resemblance required for time, have found difficulty in accounting for the resemblance successive cases bear to each other. However, for all their differences in content, it does seem that successive experiences do share a structural property: their successiveness. In the quotation above Hume highlights another case which seems of a similar sort: different simple perceptions resemble in respect of the structural property of being simple: they "resemble each other in their simplicity. And yet from their very nature, which excludes all composition, this circumstance, in which they resemble, is not distinguishable nor separable from the rest."

This structural resemblance seems to be a parallel of the kind of structural resemblance that successive perceptions bear to each other. If nothing else, this demonstrates that Hume was open to resemblance in virtue of structural properties and indeed counted it amongst the kinds of resemblances that we find in our experience. However, though this shows that Hume recognised such resemblances, this case does not yet seem to provide a route out of the challenges faced by the idea of time. Firstly, it is not obvious from the quotation whether Hume thinks this resemblance is something that we become aware of through deliberate consideration (as with the philosophical relations) or whether it is a kind of resemblance that we naturally come to and can reflectively associate in terms of. The case of simplicity seems to exhibit at least some of the elusiveness found in the case of successions and so if we do not have reason to think we would simply feel a resemblance in this case it does not seem it brings us any closer to imagining we would feel a resemblance in the case of successions. As in the case of successions then, Hume tells us that this resemblance is one we can form an idea of, and that

[260] T 1.1.5.3; SBN 14.

this idea grants us the abstract idea of simplicity, but he does not tell us any more about how this occurs.

A second difficulty is that the case of simplicity given here is not explicitly cross-modal. Given Hume's simple/complex distinction (which does not limit itself to any one sense-modality) and the apparent openness of the phrase "all simple ideas", I am inclined to say that the abstract idea of simplicity is one that applies across sense-modalities. But it is not stated here and the example given immediately above is limited to the visual case of simple coloured perceptions. Even if the resemblance involved were of the natural sort then, we might feel a slight hesitation in carrying our findings over to the case of time.

7.3. Resemblance and Experiential Feel

From these cases we can see how varied Humean resemblance can be. Equally it is of interest that there is precedent for the kind of resemblance in virtue of structural properties that seems to hold in the case of successions. However, I am not yet convinced that the kinds of resemblance explored above help us face the challenges set out. The resemblance that different successive ideas bear to each other is still elusive and the structural resemblances considered do not obviously provoke the requisite resemblance-association. Equally, the fact that the resemblance we are interested in cuts across different sense-modalities means that the other kinds of resemblance discussed above (which we might think were more noticeable or striking and so perhaps more accessible in provoking association) are ruled out from coming into play. In what follows I will explore one further sense of resemblance that Hume discusses. It is a kind of resemblance felt between ideas which are conceived by a similar "act or operation of the mind" which, in turn, appears to be linked to a similarity in what we might call "experiential feel." This kind of sameness of feel is to a greater degree than the other kinds of resemblance independent of whether the ideas related actually have similar content. This is the kind of

resemblance that I suggest is best suited to explaining the resemblances involved in the formation of the idea of time.

The case of resemblance-association I am going to focus on is one that is very different to the cases given above. Previously, each of the resemblances were founded on the content of the ideas and their properties, and what mattered was the content of the ideas. The final type of resemblance I will consider differs to this. It is not founded on the content of the ideas directly, but instead on how it feels to *have* certain ideas. More specifically, this kind of resemblance is a resemblance that is grounded in the states the mind is in when conceiving certain ideas and the experiential feel of these states. Often it will be that the act of the mind and the feel of having two different ideas is similar because the ideas themselves resemble. However, this is not always the case.

To make this notion clearer consider an intuitive example of experiential feel: if we are sighted then when we open our eyes in a sufficiently well-lit environment we receive visual impressions. Depending on what we are looking at these impressions will vary enormously. We experience innumerable different colours, differences in brightness, intensity, etc. In spite of these differences though it is natural to think that all our experiences of visual impressions nevertheless bear a kind of resemblance to each other. Part of this resemblance seems to be explained in terms of their content, for example, all visual experiences have some colour. However, part of the similarity also seems to lie in how it feels to experience visual impressions. This may be linked to the body in that all visual impressions at least seem connected to our using our eyes. There seems a further kind of intuitive resemblance between visual impressions though and this perhaps extends also to visual perceptions that include ideas of visual impressions (where we do not use our eyes), there is a sense of what it is like to visually experience something, of how it feels to have a visual experience. A similar kind of resemblance seems to be shared by experiences of impressions had by the other senses. Experiencing a smell feels different to experiencing a taste, hearing a sound feels different to feeling a touch. In spite of differences in

content, intuitively we can note a sense or awareness of what it is like to *have* certain experiences. The similarity in feel will often be grounded in certain features of the things experienced (though not, Hume seems to think, always – of which more in a moment). This idea of similarity in feel is the kind of resemblance that I suggest Hume is broadly invoking here.

The reason I point to the fact that this resemblance in experiential feel does not need to be matched by a genuine sameness in the content of the ideas is that Hume's discussion of this kind of resemblance is centred on this feature and, more specifically, a kind of mistake we are inclined to make when different ideas bear a resemblance in experiential feel to each other. Specifically, his discussion highlights that, in some cases, a sameness of experiential feel encourages us to associate as resembling, and so take to be similar, ideas which are actually quite different. To begin then I will explore a bit more fully what Hume says about this kind of resemblance and the cases he discusses it in relation to. These get their fullest exploration in his discussion of the ideas we form of enduring objects and of an enduring external world that exists beyond our interrupted perceptions.

Firstly, Hume notes that our perceptions of the external world are partial and interrupted. Every time I blink the impression I receive of the scene before my eyes is numerically distinct from the impression I had a moment ago. However, even though I will form many distinct ideas from one apparently still scene, I am strongly inclined to view the multitude of ideas as one, not many. Resemblance is responsible for this, but it comes in to the picture in two ways. On the one hand, there is the kind of resemblance we are familiar with, for any two of these distinct ideas, they near-exactly resemble in their content so I associate them in thought. However, Hume tells us that resemblance also enters the picture in a second way because "it not only causes an association of ideas, but also of dispositions, and makes us conceive the one idea by an act or operation of the mind, similar to that by which we conceive the other."[261] Since "whatever ideas place the mind in the same disposition or in similar ones, are very apt to be confounded," this

[261] T 1.4.2.32; SBN 203.

results in our coming to think of the multitude of distinct but resembling perceptions as being one, not many.[262] How exactly this occurs is worth looking at in more depth.

Hume tells us that in this case that the succession of related (in this case strongly resembling) perceptions becomes confused with a single idea of an unchanging object because both are conceived "by an act or operation of the mind, similar to that by which we conceive the other." The act or operation involved in having the one idea resembles the act, operation or disposition of the mind in having the other, and this results in our feeling a sense of similarity between the two actually different cases and, in this case, to take certain qualities of one to apply to the other. As an example of the first idea, that is, a single idea of an unchanging object, Hume gives this case:

> When we fix our thought on any object, and suppose it to continue the same for some time; 'tis evident we suppose the change to lie only in the time, and never exert ourselves to produce any new image or idea of the object. The faculties of the mind repose themselves in a manner, and take no more exercise, than what is necessary to continue that idea, of which we were formerly possest, and which subsists without variation or interruption. The passage from one moment to another is scarce felt, and distinguishes not itself by a different perception or idea, which may require a different direction of the spirits, in order to its conception.[263]

When we think of an unchanging object we allow our mind to "repose." Other perceptions may change alongside our thought of that object but the perception of the object itself "subsists without variation or interruption." Though the moments of experience continue to pass (because we still undergo other changes in our perceptual experience) this is "scarce felt" and, at least as regards our perception of the object we are focused on, we allow an apparently temporally simple yet enduring perception to persist and do the job of representing that object in thought.

Now to the second example, an idea of a strongly related succession. This idea is a complex one, it is successive and is in fact many numerically distinct

[262] Ibid.
[263] T 1.4.2.33; SBN 203.

ideas. However, these distinct ideas are united by association so as to be strongly connected in thought:

> Now what other objects, beside identical ones, are capable of placing the mind in the same disposition, when it considers them, and of causing the same uninterrupted passage of the imagination from one idea to another? […] I immediately reply, that a succession of related objects places the mind in this disposition, and is consider'd with the same smooth and uninterrupted progress of the imagination, as attends the view of the same invariable object. The very nature and essence of relation is to connect our ideas with each other, and upon the appearance of one, to facilitate the transition to its correlative. The passage betwixt related ideas is, therefore, so smooth and easy, that it produces little alteration on the mind, and seems like the continuation of the same action; and as the continuation of the same action is an effect of the continu'd view of the same object, 'tis for this reason we attribute sameness to every succession of related objects. The thought slides along the succession with equal facility, as if it consider'd only one object; and therefore confounds the succession with the identity.[264]

In this particular case, it is the resemblance between the numerically distinct ideas that bind them into a strongly connected succession and results in the easy transition between different ideas in thought. However, the other kind of resemblance is key: it is the feel of the easy transition between ideas that resembles the feeling of experiencing one single, unchanging idea. Although content resemblance is involved in the picture then, it is not what the confusion relies on. When we feel a similarity between our experience of one unchanging idea and our experience of many closely-connected ideas, how it feels to have them matters. What results in our confusing the two different ideas – and they are different, for one is single and temporally simple and the other is temporally complex and, in truth, a succession – is that the sameness of experiential feel. Because of contingent features of human cognition, these two different ideas strongly resemble in terms of how it feels to think them. And this resemblance results in our confusing the one for the other. In this case, we confuse the case of a succession of distinct views for the case of the constant and uninterrupted perception and come to think of our interrupted experience of the world as being more constant than it actually is. And this, Hume is clear, is a confusion grounded in the similarity of the disposition of the mind that the different states put us in:

[264] T 1.4.2.34; SBN 204.

> An easy transition or passage of the imagination, along the ideas of these different and interrupted perceptions, is almost the same disposition of mind with that in which we consider one constant and uninterrupted perception. 'Tis therefore very natural for us to mistake the one for the other.[265]

The disposition of the mind in this case seems to be related to the kind of effort or action that the mind is required to take in conceiving the different ideas. In the first case we experience a perception and, it being unchanging, the mind is not required to put in any extra effort in order to continue experiencing that perception, the result is that the mind does not "exert" itself any further. In the second case, though what is being conceived is in fact many distinct ideas, the mind is still not required to put in noticeable effort in order to think the succession. Instead, because the ideas are so strongly connected, the mind "like a galley put in motion by the oars, carries on its course without any new impulse."[266] In both cases the experiential feel of having the ideas is similar because the mind is not required to put in extra effort. However, the reason for this differs between the cases. For Hume what this shows is that two kinds of resemblance play an important role in the conflation of these two different cases, and they are quite different:

> [T]here are two relations, and both of them resemblances, which contribute to our mistaking the succession of our interrupted perceptions for an identical object. The first is, the resemblance of the perceptions: The second is the resemblance, which the act of the mind in surveying a succession of resembling objects bears to that in surveying an identical object. Now these resemblances we are apt to confound with each other.[267]

We feel a resemblance not only when two ideas (simple or complex) exhibit sameness of content or properties. We are also naturally inclined to feel a resemblance between ideas which are conceived by similar enough feeling mental acts. This second kind of resemblance appears to contribute as much as the first to the association and conflation of the ideas as it too provokes us to feel the two ideas to be similar.

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[265] T 1.4.2.35; SBN 204.
[266] T 1.4.2.21; SBN 198.
[267] T 1.4.2.35n1; SBN 204-5.

I suggest then, that Hume recognised a further kind of resemblance to the ones discussed above, and that this kind of resemblance can induce association between ideas. From here, I will argue that this kind of resemblance is the most plausible candidate in accounting for the resemblances that matter in our forming the general idea of time. Two preliminary points are worth noting though: firstly, there is a necessary sense of speculation to the investigation from here on in. Hume only tells us that resemblance induces the requisite associations in the case of time, he does not tell us how. My aim then is only to show that Hume has the resources available to explain this idea and, by so doing, to meet the critical challenge. Adopting this approach also offers some rewards both interpretively and critically (of which more later). What follows is speculative then; but, to those interested in assessing Hume's account for circularity, such speculation can be fruitful.

Secondly, what follows is aimed only at the general idea of time (though it might generalise well to the idea of space as well). Some of the unsatisfied commentators above argued Hume's account of all general ideas resulted in circularity. If this approach and recognising this kind of resemblance bears upon the idea of time it is possible that it bears upon some other general ideas. However, though addressing this question would be an interesting challenge, it is beyond the bounds of this project.

7.4. Resemblance and the Idea of Time

In order to offer a more general characterisation of this kind of resemblance and the association it provokes, it is necessary to set aside for the moment the specifics of the case Hume gives and look to the general features which are responsible for the feel of resemblance. In this case it seems that the perceived resemblance is grounded in the fact that some ideas, though different, put the mind into similar states. When the act of the mind in surveying one idea is sufficiently close to the act of the mind in surveying another, we feel a resemblance between those ideas. In the excerpts above, Hume explained the "act" or "disposition" of the mind sometimes in terms

of what the mind was required to do: for example, the faculties of the mind "repose themselves in a manner, and take no more exercise, than what is necessary to continue that idea," the mind does not further "exert" itself. What the mind does, though, is connected to what effect certain ideas have on the mind and so at other times the state of mind is talked about in a slightly more passive sense: a succession of strongly connected ideas produces "little alteration on the mind, and seems like the continuation of the same action." One feature of the related ideas that matter for this kind of resemblance-association then are the features that determine what the mind is required to do in order to have the ideas, for example, whether or not it is required to put in certain kinds of effort, say whether it is required to change objects or produce new perceptions.

From this we can also get a sense of the sorts of features of us as cognisers that encourage this feel of resemblance. It matters that ideas which require similar acts of the mind and effort to conceive feel similar to us. What the mind does in having certain thoughts and, as a result, how it feels to have certain ideas matters when it comes to this kind of resemblance. And note that, in the case above, the similarity we feel between ideas is not that we feel them to be the same idea in terms of content, but that we feel them to be the same kind of idea in terms of structure. We feel that a number of ideas are like a single idea. Take the single idea that results from my staring at my desk and the multitude of ideas that result from a number of distinct views of the plant on the windowsill as I occasionally glance outside: the resemblance between the distinct impressions of the plant results in a number of distinct but strongly resembling ideas. The strong resemblance between these ideas binds them together in my thought. When I experience the single idea of the desk and the numerous but tightly associated ideas of the plant, I feel the two experiences to be the same in some sense. This does not mean I confuse the content, taking the plant for the desk, it means that I feel their different structures to be the same. One is a complex of many ideas, the other is a single idea. However, in this case, I take the number of ideas to be a single idea.

Here I will argue that we can appeal to this resemblance of mental act or operation and its corresponding experiential feel in explaining the formation of the idea of time. It should be said, Waxman briefly discusses a role for this kind of resemblance in the ideas of time and space in his defence of Hume's arguments against infinite divisibility.[268] However, although highlighting some advantages this approach offers (which I will discuss in turn), Waxman's treatment is somewhat cursory (which is understandable given the much broader aim of his discussion); he does not draw out the details of such an approach, nor does he give it a full defence. In what follows I offer a fuller treatment and expansion of what this idea involves and argue that it has the capacity to resolve the challenges set out in the previous chapter.

The claim will be that ideas of particular times, in spite of great qualitative variation, require a resembling act or operation of the mind in order to be thought and, as a result, exhibit a similar experiential feel. Here the fact that it is possible to isolate a contrast class of ideas which stand in opposition to successive, temporally complex ideas becomes crucial. Firstly then, we might ask what does the mind have to do in order to think a temporally complex idea? In the above Hume noted that in the case of having a single, unchanging idea, or in the case of having a number of ideas which were tightly bound by association, the mind did not have to do very much at all. In both cases there is a kind of initial effort in producing the initial perception and from there it did not need to further exert itself. In the first case this is because there were no further perceptions required to be produced, the mind merely needed to continue the perception it was having. In the second case, this was because, although the mind is actually having many distinct perceptions, the work of producing new ones was being done imperceptibly by the connectedness of the perceptions with each introducing the next and no more mental effort being required.

[268] Waxman (1996), see pp. 135-6 and, for a discussion of some advantages of this, pp.138-9. He also notes this kind of resemblance in his 1994 work, though not in relation to the ideas of time and space. There it is discussed as a phenomena (see pp. 49-50) and in relation to personal and bodily identity (see pp. 209-10, pp. 233-5, and p. 254 especially).

Turning now to the case of the act or operation in the mind whilst having a temporally complex idea, say, an idea of some particular succession, I suggest the mind is in a sort of halfway state between having unconnected ideas and having powerfully connected ones. In any temporally complex idea there must be change or succession. This is the manner of appearance that is at the heart of the idea of time for Hume: "the idea of duration is always deriv'd from a succession of changeable objects, and can never be convey'd to the mind by any thing stedfast and unchangeable."[269] So any temporally complex idea requires change and, for this reason, requires minimally that the mind experience altering perceptions. This need not require much by way of mental activity though: think about a temporally complex idea of some cause-effect pair. The mind might be compelled from the first idea to the second whether the thinker wants to think the second idea or not, hence "if we think of a wound, we can scarcely forbear reflecting on the pain which follows it"[270] We may not want to reflect on this pain, but we are unable to resist it. Such a change may not require much mental effort, however, it will require a perceivable change in perceptions. Whether active or passive, any idea of temporal complexity will be an idea of perceptible change and any idea like this will stand in contrast to ideas of single, unchanging perceptions (and, as the case above shows, complex ideas of very closely resembling perceptions).

Temporally complex ideas must exhibit change then; however, their moments are not entirely disconnected. As argued in chapter 5 and discussed again in chapter 6, temporally complex ideas seem to involve and require a degree of associative binding in order that they be ideas of the temporally complex rather than unconnected simples. To remind, the worry was that any temporally complex idea I have seems to instantiate itself as a succession of temporally simple moments. In order that these moments appear as part of a succession and so as part of something temporally complex they need to be bound together by the principles of association. Each case will differ but this binding will typically involve several of these principles. Temporal contiguity will play a role in all, and spatial contiguity,

[269] T 1.2.3.11; SBN 37.
[270] EHU 3.3; SBN 23.

causation, and resemblance come in to different successive ideas to a greater or lesser degree. However, though resemblance can connect the moments of a succession it cannot be the kind of indistinguishably close resemblance that occurred in the case above, for any temporally complex idea will be perceivably changing. Temporally complex ideas will not consist of unbound elements then, but equally they will not be capable of passing in an imperceptible sequence, as in the case Hume considers above. This is ruled out by the requirement that they exhibit change. In this they will again stand in contrast to both simple ideas and collections of exactly resembling ideas.

Temporally complex ideas then do seem to have a distinct kind of act or operation that they require of the mind for they have a distinct manner of appearance. The mind may be more or less passive in the changes that occur, but there must be perceptible change. If the mind feels a sense of similarity in the experiential feel of unchanging ideas (as Hume states above it, at least sometimes, does), it seems equally plausible to think it feels a sense of similarity in the experiential feel of changing ideas. If it is plausible in the one case, and Hume seems committed to this, is seems just as plausible in the other case. This similarity in feel is, I suggest, the resemblance that grounds the formation of the general idea of time. Temporally complex ideas have their own distinct manner of appearance and their particular nature dictates something of the disposition of the mind in having them. This particular manner of appearance has a kind of experiential feel and it is noting the similarity in how it feels to conceive these ideas that allows for the formation of the idea of time.

7.5. Some Merits of this Approach

Although Hume's discussion of the resemblance that holds in the case of the ideas of space and time is not elaborated on enough for this offering to be much more than speculative, there are some advantages that tell in favour of using it to make sense of the resemblances involved in the formation of the idea of time. Firstly, this kind of resemblance would seem to allow us a powerful way of explaining how otherwise very disparate ideas could be felt

to resemble in spite of the property they have in common (their successiveness) being somewhat elusive. That a resemblance is elusive does not seem to bear upon whether or not ideas which exhibit it have a certain kind of experiential feel. Equally, and very importantly given the charge of circularity, feeling this kind of resemblance does not require any prior understanding of what you are experiencing, nor does it require any degree of reflection. It occurs as a result of the principles of association. If this is the sort of resemblance involved in moving from ideas of particular times to a general idea of time then it seems there is no need to accuse Hume of any circularity. Recognising this kind of resemblance does not require one already have an idea of time, or of the features relevant to time, it only requires that one be an associative creature who reacts to certain stimuli in certain kinds of ways. And Hume seems committed to humans being just that.

Secondly, a huge advantage of this kind of resemblance is that there seems to be no barrier whatsoever to our feeling cross-modal resemblances. Whether two ideas are derived from the same sense-modality or different ones, the similarity in experiential feel stays just the same for it locks onto the aspect of the ideas which are instantiated by all: their successive manner of appearance. This kind of resemblance does not require sameness of content or even closeness of content. It requires only change and our temporally complex ideas all exhibit that.

Thirdly, and as noted by Waxman, this kind of resemblance grants us a neat way of explaining why Humean resemblance differed to Berkelean resemblance in spite of their otherwise very similar approaches to general ideas.[271] Furthermore, the way that their accounts of resemblance differ in light of this explains exactly why Hume, but not Berkeley, took there to be an acceptable form of cross-modal resemblance. For Hume, there is a kind of resemblance that depends on experiential feel rather than the content of the ideas themselves and so Humean resemblance does not always require sameness or similarity in the content of the ideas. For Berkeley, on the other

[271] For discussion of this see Waxman (1996) pp. 138-9.

hand, the absence of anything like qualitative similarity between ideas of visible space and ideas of tangible space meant there could be no resemblance between them. Instead, he explains why we imagine them to resemble by appeal to experience and custom:

> That which I see is only variety of light and colours. That which I feel is hard or soft, hot or cold, rough or smooth. What similarity, what connexion have those ideas with these? Or how is it possible that anyone should see reason to give one and the same name to combinations of ideas so very different before he had experienced their coexistence? We do not find there is any necessary connexion betwixt this or that tangible quality and any colour whatsoever. And we may sometimes perceive colours where there is nothing to be felt. All which doth make it manifest that no man, at first receiving of his sight, would know there was any agreement between this or that particular object of his sight and any object of touch he had already been acquainted with… [T]here is no discoverable necessary connexion between any given visible magnitude and any particular tangible magnitude; but…it is entirely the result of custom and experience, and depends on foreign and accidental circumstances that we can by the perception of visible extension inform ourselves what may be the extension of any tangible object connected with it.[272]

With the focus in at least some cases being on what it is like to have an idea, rather than the intrinsic features of the idea itself, there seems no bar to this resemblance holding between ideas of different sense-modalities so long as the act or operation of the mind is sufficiently close and, for successive ideas just as for the unchanging ideas Hume discusses, it seems plausible that this is the case. Appealing to Hume's recognition of this kind of resemblance and applying it to this case then allows us to explain why their different views on resemblance resulted in different views on the resemblances relevant to space.

In sum, though the textual under-determination means this approach can only ever be something of a reconstruction rather than an interpretation, if we do adopt this route we find a way by which we can explain the resemblances Hume was committed to, by appeal to a process that could plausibly generate them, and by employing only tools he himself employed. The kind of resemblance is a kind that he recognised and saw to be potentially influential. Though he did not appeal to it as a unifying force in

[272] Berkeley (1948), *Theory of Vision*, sections 103-4.

the idea of succession, he did use it to explain the association of the ideas which effectively form the contrast class to the successive. On the whole I would argue that, in spite of the speculative nature of this, we have reason to think this kind of resemblance a could be a helpful tool in understanding Hume's account of the general idea of time.

The merits of appealing to this kind of resemblance make it a tempting route: it allows us to explain how we might feel a resemblance between otherwise disparate ideas and across sense-modalities. It also, I suggest, offers a satisfying response to the challenge of circularity and presupposition in that we do not need to presuppose possession of a prior idea in order to explain how we come to feel these resemblances. Given the textual evidence that Hume thought this sort of resemblances could provoke association in different but comparable cases, we might reasonably expect it to do so here as well. We may, at a later time, come to reflect on these experiences and form a more conscious understanding of their similarities, perhaps in virtue of a recognition of the structural resemblances the related experiences bear to each other, but we do not need to do this in order to form the idea itself.

Once again then, the picture that emerges is one on which the mind does a great deal of work pre-reflectively and prior to the possession of the idea of time. The principles of association both allow us the means to feel a resemblance and the tools to associate in virtue of this feel. The idea of time at this general level is highly reliant on the mind for its formation, just as we might think all general ideas are, for they all equally require association for their functioning. At both stages of the formation of the idea of time then, the ideas formed are heavily reliant on the mind and in particular, the principles of association. Without the appropriate stimulation in terms of the properties of experience we could not form these ideas. However, were we not the kinds of creatures that we are, with the associative dispositions we have, we would be equally incapable. Here we find a great deal of the complex interplay between us and the world as we experience it. That this is so is hardly a surprising conclusion to draw from Hume's work, but the case

of the idea of time does seem to offer a striking view of exactly how deep and pronounced this interplay really can be.

8. Conclusion

8.1. Summary of Arguments

In summarising my conclusions it will once again be helpful to remind ourselves of the two-part system Hume proposes as summarised at T 1.2.4.

> Our system concerning space and time consists of two parts, which are intimately connected together. The first depends on this chain of reasoning. The capacity of the mind is not infinite; consequently no idea of extension or duration consists of an infinite number of parts or inferior ideas, but of a finite number, and these simple and indivisible: 'Tis therefore possible for space and time to exist conformable to this idea: And if it be possible, 'tis certain they actually do exist conformable to it; since their infinite divisibility is utterly impossible and contradictory.
>
> The other part of our system is a consequence of this. The parts, into which the ideas of space and time resolve themselves, become at last indivisible; and these indivisible parts, being nothing in themselves, are inconceivable when not fill'd with something real and existent. The ideas of space and time are therefore no separate or distinct ideas, but merely those of the manner or order, in which objects exist: Or, in other words, 'tis impossible to conceive either a vacuum and extension without matter, or a time, when there was no succession or change in any real existence.[273]

The first part of Hume's system tells us that our ideas provide a coherent model for the spatio-temporal structure of the world in terms of a foundation of simple indivisibles. We find we have a consistent model for space and time conceived in this way and, through his negative arguments against infinite divisibility, Hume suggests the same cannot be said for infinitely divisible space and time. Since we know the first model to be consistent and conceivable, Hume would say we know it to be possible, for: "whatever we can *conceive* is possible, at least in a metaphysical sense."[274] Since he judges the alternative not to be possible, he concludes that that space and time themselves actually do conform to this finitely divisible model. I have suggested that there is a degree of conditionality that is inherent in his analysis: I read him as suggesting that *if* there exists anything which can be appropriately called spatial or temporal, then it must be

[273] T 1.2.4.2; SBN 39-40.
[274] T Abstract 11; SBN 650.

structured in his way. Although Hume does not highlight this conditional element in his summary here, I have argued it is a natural result of his methodology, and rules that seem to govern when and how our ideas can be called adequate representations. This is a point I will discuss in more depth below.

I focused my discussion first on the negative arguments against infinite divisibility and then on the positive proposal and its adequacy. My aims were to address both the interpretive questions regarding the workings of the argument and the nature of Hume's solution, and to critically evaluate the account that emerged. The way I sought to do this was primarily to reassess the methodology Hume is employing in T 1.2.1. I argued his approach here was to use the only tools available to us: our ideas, and that, as above, the broad nature of the argument was conditional, that is, aimed at delineating the spatio-temporal structure of the world should it be such as to conform to our ideas of space and time at all (and so, should it be such as to be appropriately called spatial or temporal).

One of the big questions I was concerned to address in my examination of the negative arguments was why the coexistence of moments was viewed as contradictory. On this I argued that this is best understood by thinking about his concept of time. Specifically, that in order for something to be appropriately called temporal it must exhibit change. In spite of appealing to features of the concept of time which are set out only after these arguments as a way of illuminating this, I suggested that both the concept of time and the nature of moments relied upon here get their deeper motivation and explanation by considering commitments that emerge in T 1.1. In particular, his rejection of abstraction by separation means time and moments require existing things, and changes in what exists. Recognising this allows us to explain both the contradictory nature of coexisting moments appealed to in the third argument, and the underlying commitment to aggregation in the first argument. I was especially keen to highlight through this that the distinctness of moments is important, but also derivative. We do not need to appeal to distinct moments which exist prior to the whole in order to explain

Hume's arguments. The distinctness of moments is parasitic upon what I called their intrinsic features, essentially, the features of the existing things which exhaustively characterise them. In virtue of this, we can explain Hume's arguments merely by appeal to a propertied whole. This is of crucial importance for it is what means he does not simply beg the question against either the infinite divisibility theorist or those who espouse potential parts.

In chapter 3 we saw a further way in which the intrinsic properties of moments came into play: I explored two challenges that arise for moments conceived as components of durations given that they are both simple, and ontologically fundamental. Hume's solutions to these problems initially seemed somewhat inadequate. He focused on intrinsic properties and yet it seemed that the problem was one of extrinsic relation; it was not clear how these intrinsic properties could possibly address the problems on the table. I suggested that we could, just as we did in chapter 2, make more sense of this by appeal to the simplicity of moments and their intrinsic features (alongside an understanding of the concept of time and what it requires). I argued that the simplicity of moments alongside their necessarily contrasting intrinsic features dictated both that any temporal manifold must be discrete and that the moments of this manifold cannot coexist. From this, I contend that simple moments are perfectly capable of playing the role that Hume requires of them.

Considering this first part of Hume's system, I suggest we can draw out a few points of note: firstly, both the structure of the whole section (set out as it is in terms of conceivability to possibility, and consistent models illustrated by our ideas), and the workings of each individual argument, rely heavily on the use of ideas as models. This we should expect given the methodology he proposed in T 1.2.1. Limited though this methodology is, it does provides adequate grounding for his investigation, and it requires only tools that we have available to us: our ideas. Secondly, what drives his arguments forward in this first part are, more than anything else, the commitments of T 1.1. and the constraints these basic principles place on the concept of time and the possible nature of a temporal world. Time requires not only existing things,

but also difference in what exists. These existing things provide the intrinsic content for any moment, and the change that grounds the existence of any duration. This is the third point that seems especially worthy of note: that what emerges is an interesting interplay between the intrinsic features of moments and their extrinsic relations. By appeal to moments having a certain intrinsic nature certain things must be true regarding how moments can exist in relation to each other. This complex interplay between intrinsic features and extrinsic relations is exactly what is not captured by any interpretation which concentrates only on distinctness of moments at the expense of considering their internal nature. Equally, any such interpretation will seem to neglect Hume's own response to these problems. He clearly thinks intrinsic features are important, on this reading we can see one reason why this might be.

The second part of Hume's system aims to make sense of what our ideas of time and space are in light of their finite divisibility. It is important to note that, when Hume tells us the second part of his system is a consequence of the first he limits the antecedent to only the first part of the first part of the system. That is, to the arguments against the infinite divisibility of our *ideas* offered in T 1.2.1. rather than the arguments against the infinite divisibility of time itself as set out in T 1.2.2. ("The parts, into which the ideas of space and time resolve themselves, become at last indivisible; and these indivisible parts, being nothing in themselves, are inconceivable when not fill'd with something real and existent.") As such, although the first part of the system really does seem to draw a distinction between our ideas of time and space and the implications of this for time and space themselves (hence ""Tis therefore possible for space and time to exist conformable to this idea: And if it be possible, 'tis certain they actually do exist conformable to it"), the implications of the first part of the system that bear upon the second concern the ideas we form of time and space, rather than time and space themselves. Having reduced the ideas of parts and moments to something utterly simple and indivisible, Hume must make sense of how these can nevertheless convey the ideas of time and space to us, and what the content of the ideas conveyed are. In my discussion of the second part of his system

I considered a number of challenges that presented themselves, both interpretive and critical, to the two-step process of forming the idea of time.

In chapter 4 I presented a challenge to the act of forming ideas of particular times which arose as a result of the successive nature of our experience. I considered several routes to forming ideas of particular times from temporally simple experiences and argued they could explain this process without circularity: they all required us to interpret as temporally complex content which was, in truth, temporally simple. This, I suggest, we are in no position to do prior to forming (at the least) these most basic ideas of time. By showing the inadequacy of these approaches I aimed to lend indirect support to approaches which reinterpret the nature of the Copy Principle in other terms.

In chapter 5 I considered two such approaches: on the first, the role of the mind is significant (and recognised), on the second, the role of the mind is presented as being reduced. I posed some problems for this second route with an eye to showing that a more pronounced role for the mind in the formation of these ideas is unavoidable. I argued that, whichever attitude we take towards the Copy Principle, we must accept that Hume's idea of even particular times requires a considerable degree of mental activity. These ideas can be formed without circularity, however, they cannot be explained without the mind. To stress the role of the mind and, in particular the principles of association, in Hume's work is in a sense nothing new. However, to see that these ideas require such a degree of involvement is interesting. More interestingly still is that this level of involvement does not require supposing that these ideas are not in some important sense derived from experience; I argued there is no problem of circularity, nor must we suppose them innate. In spite of this broad derivation from experience though, ideas of particular times contain crucial elements which are contributed by the mind as a result of the kinds of cognisers that we are and how we are inclined to respond to certain kinds of stimuli. This is perhaps an unexpected result, but it is a noteworthy one.

In chapters 6 and 7 I examined the importance of resemblance-association to the idea of time and the problems this generates. Even given the disparate and cross-modal nature of the associated ideas, I proposed Hume has the resources available to account for their resemblance, and, indeed, how we come to think of them as resembling. I contend that he can explain the formation of this elusive general idea without circularity then and, indeed, using only tools that he has already recognised. Once again though, it is only by accepting the increased role of the mind that this is possible for, at both stages in the formation of the idea of time, the mind plays a substantial role in its creation. The idea of time that comes to the fore is, in one sense, an imaginative construct in that, without the imagination and the connections afforded by the principles of association, we would have no such idea (nor would we have any general ideas, for they all rely on the principles of association for their creation). However, though created in this way, the idea of time is equally reliant on the properties of experience to provoke these reactions in us. The emerging idea is shaped by our natures and which properties we are sensitive to, but it is far from cut loose from experience.

8.2. Emergent Themes

I stated in the introduction that my methodology in writing this piece was, as far as is possible, to allow Hume's commitments regarding time and our idea of it to come to the fore. By considering what he appears to be committed to regarding these topics we were in a position where we could then allow these commitments to reflect back upon other themes in his work in a way that might prove illuminating. In this section I will briefly consider two emerging themes: the nature of Hume's empiricism and the role he requires of the mind, and the conditionality I noted above and the way that our ideas constrain the possible nature of the world if it is to be called temporal at all.

8.2.1. Empiricism and the Role of the Mind

In the epistemology chapters I argued that the idea of time was heavily reliant at every stage of its formation on the role of the mind: were we not

associative creatures we could not interpret impressional content as structured, or as connected, and so could not form ideas of particular times. Were we not associative creatures we could not feel the resemblances that ground the general idea. Equally, in the metaphysics the role of the mind is not absent: the nature of thought places a kind of constraint on our idea of time which, in turn, places a constraint on what kinds of things in the world can properly be called temporal. The role of the mind is heightened throughout Hume's discussion of time and the picture that emerges is one on which our associative natures and way we as creatures respond to certain kinds of stimuli are paramount.

At every step, then, the role of the mind is pronounced. Regarding the general idea of time this is perhaps less surprising, for Humean general ideas are explicitly stated to have their structure (the structure that allows them to play their roles) in virtue of patterns of association. Without the mind supplying links between the related particular ideas we would have no general idea for we would not have an idea that could represent generally. This is a consequence of the fact that it is not the content of a single idea that affords the general idea of time its generality. Its generality is grounded in the relations between our ideas. General ideas enable us to think about features beyond those of the particulars ideas involved because they enable us a means to bring to mind, or at least have available through a developed custom, ideas which can tell for or against the inclusion of new ideas in the resemblance class.

That the role of the mind should be so pronounced even in our forming ideas of particular times is perhaps more surprising and yet, in chapter 5, we saw that such a consequence was hard to avoid. Our most basic ideas of succession are successive and, in order to be successive ideas of temporal complexity, they require a form of binding which is provided by the mind. Equally, impressional content, though complex, does not appear to be given as a complex. Even if we think that the mind is capable of copying complexes of things then, I suggested we must still see that the mind is required to make such a complex available to us. In evaluating the

implications of this increased role for the mind, some might already be worried. Appealing to ideas that are spread out in time (and perhaps even appealing to ideas that are spread out in space) seems to require the existence of an enduring mind to take them in and to do the essential relating. However, Hume's explicit discussion of the mind contains a worrying note of scepticism regarding its existence, or at least regarding our knowledge of its existence. This might be thought to be dangerously in tension with the proposals I make here. Personally, I am inclined to read Hume's comments regarding the mind as placing only an epistemic challenge, rather than an ontological one; I see them as a nod to the essential unknowability of the perceiver and an avocation of caution in ascribing properties and roles to something beyond our experience in this way. However, we might take Hume's claim to be a deeper one: that there really is no mind to play any role. On either interpretation, there seems there could be a tension with any account on which the mind was highly involved and active.

One possible line of response to this is to go the way that Stroud considers: that we can simply translate talk of a mind into talk of the patterns exhibited in perceptions: "For me to think, to feel, to reflect, to attribute identity to something – in short, for me to perform any of these 'mental acts' – is just for certain perceptions to occur in my mind. The mind's 'activity' consists in nothing more than the occurrence of perceptions in it." So we translate the claim that the mind forms a certain idea after being presented with certain stimuli into the claim that after certain perceptions occur (whichever ones constitute the stimuli in this case), other perceptions tend to occur (whichever ones constitute the idea).[275] Here all that is appealed to are perceptions and what is highlighted is that a simple pattern, as a matter of fact, emerges. If we go down this route it seems we can translate talk of the mind into talk of the patterns of occurrence amongst perceptions. If one is squeamish about allowing for talk of the mind in Hume's work, this line of response does seem to be available.

[275] Stroud (1977), see especially pp. 129-131, and pp. 134-136.

Personally, I am not so squeamish in this regard. As I said above, I take Hume's caution regarding the mind to be an appeal to an epistemic challenge rather than an ontological one. As such, I am happy enough to talk more loosely in terms of the role of the mind so long as we take care to infer about the mind only what is apparent from these patterns that emerge in our thought. We can then, I suggest, infer several things about the role of the mind and the way we as creatures are inclined to associate perceptions indirectly by examining carefully the ideas we find ourselves to have. And affording an increased role to the mind need only do this much. By proceeding in this way we can be sensitive to Hume's advocated caution whilst still explaining, on some level, how we are capable of forming the ideas that we do.

A second thing is perhaps worth highlight as well, specifically in relation to the account I have forwarded: although I posit an increased role for the mind, that role does not involve it doing work of any kind that it is not already recognised as doing by Hume. The principles of association are at work, as is our tendency to form distinguish what is different. However, these are not new roles for the mind. The basic nature and function of these mental activities remains entirely the same, I have only suggested we require their assistance in more places than we might have previously thought.

In virtue of this role for the mind there is a core of subject-dependence that runs through our formation of the idea of time and, were we to remove this, the idea itself would be unachievable. This subjectivity might be seen as a threat to some: a step too far in making time an ideal phenomenon. However, we can also see, in particular from the results of chapters 6 and 7, that there are clear benefits to thinking of these ideas in this way. If association in virtue of perceived resemblance, for example, were not afforded this subjective element it has, it would face a great barrier to doing the job Hume requires of it in branching across ideas of different sense modalities.

The principles of association are key then and, what is more, the idea of time demonstrates the substantial and interesting role played by resemblance-association. Although, causation often seems to play the starring role in characterising our understanding of the world and the way we perceive it to be, when we consider the idea of time, causation plays a lesser role and resemblance does the lion's share of the work. Resemblance, though, is arguably the most subjective, varied, and permissive of all the natural relations, provoked by a real variety of different circumstances. In chapter 7 I looked at a few examples of resemblance in Hume and we saw it admits of several different triggering factors. A resemblance can strike us where we did not see it before in light of a change in our ideas, or even in changes in the relations between our ideas. As a philosophical relation, resemblance is ubiquitous and depends on the qualities of the ideas, but, as a natural, associative relation, resemblance can depend on everything from what ideas we have formed to how having certain ideas feels to the mind. Considering the idea of time allows resemblance to come to the fore as a really strange and interesting element in Hume's work and one that would certainly benefit from greater consideration.

Even in the case of resemblance though, features of our experience are not unimportant. The interplay between, on the one hand, us as creatures (the ways our minds work and the natural dispositions we have), and, on the other hand, the nature of experience and the properties it has becomes apparent. Natural associations relies on our responding in certain ways to certain kinds of stimulus: without the appropriate provocation from experience, we would not come to feel resemblances. Experience must exhibit the elements that are required to compel us towards forming such connections, however, the work of forming them is nonetheless reliant on us. We might have formed different ideas were we or the world different, however, in virtue of how we are and how experience is, we are contingently compelled towards thinking in certain kinds of ways. In this respect, a powerful dependence on experience remains important in Hume's work and its features are, given what we are like, what press us one way rather than another. The kind of empiricism that emerges, then, is one that cannot be

captured by mere reference to something like the Copy Principle. Nevertheless something in the spirit of this principle remains core. The nature of his empiricism is clearly complex, however, his commitment to the idea of time does not have us floating entirely loose from the world of experience.

8.2.2. Conditionality and the Relationship Between Ideas and the World

In spite of our being strongly informed by experience and deeply reliant on it even given the influence of human psychology, there is a second way the mind and ideas constrain any world beyond them which is core: throughout Hume's discussion, the idea of time itself places bounds upon what can be appropriately taken to be temporal. This does not tell us that the external world is some way and not others, it does not even tell us that there exists such a world. It seems that the world, should there be one, could still be any number of ways. However, what does seem to emerge is a constraint on how the world can be *if it is appropriate to call it temporal at all*. Here Hume limits what the world can be like if it is to instantiate the kind of structure that we can possibly call "temporal": if, for example, the world is not successive, then it is not temporal. Or better, it is not temporal *in any sense we can understand the idea*. This, perhaps initially quite surprising, thread of conditionality and constraint runs right the way through Hume's discussion of time and its results are interesting. However, the mind's role in forming the idea of time perhaps allows us to make this conditionality a little clearer.

We could ask: could the world be temporal in some sense beyond our understanding of what it is to be temporal? Hume's answer, I suggest, must be: no. We have an idea of time that is derived from the particular nature of our experience and, I have suggested, very much the product of the kind of creatures that we are with our particular mental dispositions and habits. Our idea of time is a very human one. However, it is the only idea we have of time. To ask whether the world can be temporal in a way that does not fit with this is not to ask whether it is temporal. Though our concepts are

human and relative to us, they still seem to place bounds on the kinds of things we can look for in the world and on the ways we can understand the world as being. Here then, is another kind of limitation that broadly occurs as a result of his empiricism: our investigations into the nature of the world are deeply informed by our ideas and our sensory and rational capacities. There may be an interplay of a number of factors in our having the ideas we have but there is a real empiricism driving the whole project for it is entirely grounded in our ideas and our experience. Should we sever our investigation from this grounding we will lose the only tools that we have available to us.

This conditionality also encourages me to draw back from applying familiar categorising terms to the picture I have argued emerges. Talk in terms of realism or phenomenalism, say, would lose the interesting subtleties here. On the whole, I take Hume to be interested in reaching beyond our perceptions in a certain sense, though nothing I have said here puts Hume into either of these camps. The conditionality makes either inappropriate: I take him to be telling us about the possible structure of an external world but not taking a firm side of whether such a world exists. There does seem to be a latent kind of realism which flows through all of the first part, though I take it we cannot apply any contemporary notion of realism to an early modern author unproblematically. We might think this thread is merely a reflection of the pressure that Hume himself noted: "'tis in vain to ask, Whether there be body or not? That is a point, which we must take for granted in all our reasonings."[276] The way I have sought to characterise him avoids attributing a commitment to an external world, or to external time and space to him. It also avoids staking his position out as only accepting a phenomenal reality. By appealing to this conditionality we can accept that experience pulls us in both directions, without requiring that we come down on either side of this essentially unknowable question.

[276] T 1.4.2.1; SBN 187.

8.3. The Relationship Between the Two Parts Re-Visited

To conclude I want to briefly return to considering the relationship between the two parts of the system Hume sets out. From the above, I suggest that the relationship between them is interesting and deep, and Hume's characterisation of the connection as "intimate" is entirely correct. I have argued that a unified understanding of the two parts of the system is possible, for they are tightly connected in a few different ways. Firstly, I suggest that the core motivating principles in both parts are primarily commitments set out in T 1.1., commitments that gain their support from his brand of empiricism and the introspective method he espouses. His rejection of abstraction by separation, for instance, clearly has a role to play in the second part of the system. However, I argued it also has a role to play in the first. We can see elements of it involved in the conditionality as I discussed above, but also in the arguments themselves. These commitments inform him directly in his epistemology and still inform him, albeit more indirectly, in his metaphysics.

Secondly, the parts exhibit a kind of unity in their broader conditional methodology for, on such an approach, the metaphysics cannot help but be informed and constrained by the idea of time and our particular epistemological position in the world. The kinds of creatures we are, our limited sensory access, our limited powers of conception, even the association inherent in our ideas, all come in to play in constraining our investigation into the temporality of the world, should there be one. The two parts of Hume's system, given such a project, cannot help but be connected. However, by using our perceptions in careful ways, as I advocated in chapters 2 and 3, we can form a kind of bridge between our experience and the world. Adequate representations are available and they open the door to a conditional knowledge of things. This knowledge is conditional and it is limited, nevertheless it is there.

I have argued then that the parts of Hume's system of time and space are not only "intimately connected" but that being sensitive to the ways they are connected can be a useful tool in itself. If we proceed cautiously, we can

allow each part of the system to illuminate the other. What emerges is a complex and interesting account of time and our idea of it. However, we also find an interesting account of ourselves. An examination of Hume's account of time, then, does not just offer a way of understanding our experience, and how that experience could relate to a world beyond it. It also offers us an insight into the sorts of creatures that we are.

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